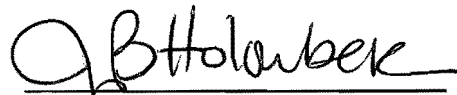


TIRZ 17 Redevelopment Authority
Memorial City Redevelopment Authority
Houston, Texas

The Board of Directors of the TIRZ 17 Redevelopment Authority (aka the Memorial City Redevelopment Authority) will hold a special meeting on Friday, August 15, 2014, at 7:00 a.m., at Westin Houston Memorial City, Hibiscus Ballroom on 3rd Floor, 945 Gessner, Houston, Texas 77024, to discuss, and if appropriate, act upon the following items:

1. Call meeting to order, take attendance, and verify a quorum is present.
2. Approve Development Agreement for Conrad Sauer detention pond.
3. Approve task order from Lockwood, Andrews, and Newnam, Inc. for engineering review of Conrad Sauer design.
4. Receive report and recommendations from Annexation Committee.
5. Approve annexation map and authorize submittal to the City of Houston.
6. Discuss proposal from Lockwood, Andrews, and Newnam, Inc. for Memorial Drive preliminary engineering.
7. Discuss proposal from Klotz and Associates for North Gessner preliminary engineering.
8. Lumpkin Road Drainage and Mobility Project, including:
 - a. Approve task order from Lockwood, Andrews, and Newnam, Inc. for revised design;
 - b. Approve Lockwood, Andrews, and Newnam, Inc., to advertise for bid and solicit bids from qualified general contractors for construction.
9. Recommendation and solicitation for Land Search Consultant services for the purpose of identifying potential detention basin sites.
10. Convene in Executive Session pursuant to Section 551.074, Texas Government Code, to deliberate the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of a public officer or employee.
11. Reconvene in Open Session and authorize appropriate action regarding the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of a public officer or employee.
12. Adjournment.



Attorney for the Authority

501970.docx

Persons with disabilities who plan to attend this meeting and would like to request auxiliary aids or services are requested to contact Don Huml at (713) 829-5720 or donhuml@houstontirz17.org at least 72 hours prior to the meeting so that appropriate arrangements can be made. For complaints or concerns regarding compliance with the Americans with Disabilities Act, please contact Don Huml, Executive Director for the Authority.



August 12, 2014

Ann Givens, Chair of the Board
Memorial City Redevelopment Authority / TIRZ 17
8955 Katy Freeway, Suite 215
Houston, Texas 77024

Attention: Mrs. Ann Givens

**Re: Memorial Drive Drainage and Mobility Improvements TIRZ 17 CIP No. T-1731B
Proposal for Phase I Preliminary Engineering Report**

Dear Mrs. Givens,

Lockwood, Andrews and Newnam, Inc. (LAN) is pleased to submit this proposal for engineering services consisting of the preparation of a Preliminary Engineering Report (PER) for drainage, roadway, pedestrian, public utilities and traffic improvements along Memorial Drive between Beltway 8 frontage road and Tallowood Road.

The report will be prepared in accordance with the current City of Houston Infrastructure Design Manual and will focus on evaluation of existing storm sewers and overland flow patterns, roadway geometrics, pedestrian facilities, traffic operations, access management, right of way encroachments and assessment, utility coordination and assessment, environmental assessment, geotechnical investigation, tree impacts, detailed survey, pavement condition, and 30% plan and profile drawings.

The proposed project is identified in the current TIRZ 17 five-year Capital Improvement Plan. The PER is Phase I of the overall project development and will identify the impacts associated with the implementation of the drainage, roadway, pedestrian, public utilities, and traffic recommendations. The PER will be presented to the City of Houston Technical Review Committee for review and comment.

We propose to perform PER services for an amount of \$428,600.00. A detailed Scope of Services can be found in Exhibit "A". Exhibit "B" provides a detailed breakdown estimate of the fees for the basic engineering services and additional services respectively. We are prepared to begin this work immediately.

Please feel free to contact me at (713)266-6900 if you have any questions or need additional information.

Sincerely,

Accepted For
Memorial City Redevelopment Authority


Muhammad Ali, P.E.
Project Manager
MA:RO:KG

Signature Date

Print

Mrs. Givens
Memorial City Redevelopment Authority
August 12, 2014
Page 2

Accepted for City of Houston

Signature

Date

Print

Attachments: Exhibit A – Scope of Services
Exhibit B – Fee Schedule
Exhibit C – C.N. Koehl Urban Forestry, Inc. Tree Protection Proposal
Exhibit D – Kuo & Associates Roadway Topographic Survey
Exhibit E – Aviles Engineering Corp. Geotechnical Investigation Proposal

Exhibit A

Memorial Drive Drainage and Mobility Improvement Project (CIP # T-1731B)

Scope of Services

This proposal is for professional engineering services for drainage, roadway, construction phasing, public utilities, pedestrian and traffic improvements along Memorial Drive between Beltway 8 frontage road and Tallowood Road. The project is located within the boundaries of Tax Increment Reinvestment Zone Number 17 (TIRZ 17) in the City of Houston, Harris County, Texas. It's also identified in the City's adopted TIRZ 17 five-year Capital Improvement Plan. The Memorial Drive project will provide drainage improvements, and increase mobility, safety, and access management.

The drainage goal of the project is to improve the conveyance system to meet City criteria for the 2-year and 100-year storm events, and to oversize the storm sewer with the installation of large reinforced concrete boxes that would provide additional benefit for the adjacent community and reduce overland flows to neighboring areas.

The pavement is in poor condition and has exceeded its useful service life. The roadway will be improved to a curb and gutter section to improve mobility and access management along the project corridor. The roadway will also be reconstructed to meet current roadway geometrics requirements straightening out the horizontal geometry of Memorial Drive and bring it up to current City design standards to improve safety. The existing sidewalks are inadequate and discontinuous. The project will include sidewalks to meet City requirements to improve pedestrian safety and promote a pedestrian friendly environment. The PER will include a more detailed analysis of the roadway geometric and access management reasonable and feasible improvements.

The signalized intersections along the project will also be improved to current standards including up to date traffic signal hardware, pedestrian accessibility, and optimal vehicular progression. In addition, the public utilities along the project have exceeded their intended service life and will be upgraded/replaced.

TIRZ 17 has identified Memorial Drive as one of their key capital improvement projects to focus on in FY 2015 as it would make an immediate significant impact to the community. As part of the TIRZ 17's ongoing efforts to keep the community informed, a public meeting to present their plans for Memorial Drive will be held. The objective of the event is to update the public on the project and to solicit input from the public.

PHASE I – PRELIMINARY ENGINEERING REPORT (PER)

The PER is Phase I of the overall project process and will identify the impacts associated with the implementation of the PER recommendations. The following scope describes the procedures that will be followed to provide Preliminary Engineering services and produce the Preliminary Engineering Report. The details of the scope are as follows

I. BASIC ENGINEERING SERVICES

A. & B. Roadway and Public Utilities Design and Planning Services

1. Site Visit & Data Collection

- a. Visit the area to field verify all provided survey data on Memorial Drive and the proposed project corridor. Photographs and field verification of existing geometry, striping, signage and pavement type will be completed during the field visit. Field visit will also be performed to assist in drainage area boundary determination, and to verify the available data collected for the existing storm sewer system. The area will be reviewed to confirm features shown in the 2008 LiDAR information and identify areas where hydraulic reinforcements may be necessary to correctly show overland sheet flow paths.

- b. Previously completed reports and studies will be obtained and reviewed for relevant information regarding the proposed roadway improvements.

2. Establish Roadway Baseline/Project Control

Different roadway alternatives will be evaluated. Project baseline for the identified improvement alternative will be established. Base plan and profile sheets will be developed at a 1 inch is equal to 40 foot scale.

3. Develop Plan & Profile Sheets – 30% Drawings

Plan and profile drawings will be prepared for the recommended alternative. The plan and profile sheets, which will follow the City of Houston's drawing requirements, will include existing topography and utilities, proposed alignment and proposed pavement footprint for the recommended alternate in plan view. The profile will include natural ground at the limits of the existing right-of-way and at the centerline of the existing roadway. Replacement of the existing water lines within the limits of the project where warranted will be documented on the plan and profile sheets. Sanitary Sewer replacement is anticipated and will be evaluated for conflicts and improvement needs. Storm Sewer upgrades will also be shown in plan and profile views including proposed inlet locations, proposed manhole and junction box locations, and 2-year and 100-year HGL's. The plan and profile sheets will indicate the approximate location, size per available data, age of service lines, and capacity of all public utilities. Indicate approximate location and size per available data for private utilities.

4. Alignment Definition/Develop Right Of Way Map

If additional right-of-way (ROW) is necessary to accommodate the proposed roadway alignment for the preferred alternative, a detailed ROW investigation will be performed using parcel information identified in the topographic survey. The ROW investigation will accurately identify the total number of parcels, the necessary acquisition area for each parcel and parcel ownership information.

5. Existing and Proposed Typical Sections

Existing horizontal dimensions, pavement structure makeup and thickness, right-of-way and easements, sidewalks, shoulders, and drainage ditches will be shown for each of the identified alternatives and the existing condition.

6. Investigations of Existing Public and Private Utilities:

- a. Existing public and private utilities will be investigated in accordance with the City of Houston *Infrastructure Design Manual dated July 2009*.
- b. Identify potential utility conflicts based on field visits and a site topographical survey.
- c. All available information will be researched and reviewed, including property information, existing water mains and appurtenances, well collection lines, sanitary and storm sewers, facilities (house service lines, manholes, etc.), telephone, power, gas, and cable TV lines, as well as other private utilities. All of the above-referenced utilities shall be shown in the plan and profile drawings (Task I.A.3) in accordance with the City of Houston *Infrastructure Design Manual dated July 2012*. Where manholes, valves, etc., are buried under pavement, or after due diligence cannot be located, installations will be shown per record drawing information and labeled "Not Field Located".
- d. On major transmission pipelines, the various pipeline companies will be contacted for their assistance to determine the product material, type of pipe material, depth, and routing of pipelines. Names of contacts, dates, times, and other pertinent information obtained at the field meeting shall be recorded.

7. Develop Construction Cost Estimates

Preliminary construction cost estimates will be prepared. Construction cost estimates will include the necessary level of detail to enable the evaluation of alternatives, but will not be comprehensive.

C. DRAINAGE ANALYSIS

Memorial Drive between Beltway 8 and Tallowood Road is primarily part of the W153-00-00 watershed and is generally drained by storm sewers and road side ditches extending along the project alignment draining to W153-00-00. The western limits of the project from West Bough Lane to Beltway 8 drain to the Beltway 8 storm sewer trunkline before continuing downstream to Buffalo Bayou. The project area was documented as having significant drainage deficiencies in the TIRZ 17 Regional Drainage Study with reported flooding during the April 2009 rain event. The preliminary engineering drainage analysis will cover the following:

- (1) Identify the performance of the existing drainage infrastructure including documentation of system deficiencies
- (2) Develop improvement alternatives to address existing deficiencies and to accommodate the proposed roadway improvements, and
- (3) Address drainage impacts associated with the proposed improvements including effects of additional increased impervious cover, a reduction in storm water storage, and modifications to overland sheetflow patterns.

The preliminary engineering drainage analysis will build on the TIRZ 17 Regional Drainage Study leveraging previously developed modeling and initial concept development.

1. Analyze Overland Flow Patterns

The Engineer shall develop overland flow paths (extreme event) and drainage areas for the project limits and surrounding areas based on the 2008 LiDAR using the ArcHydro analysis tools. A ponding depth analysis will also be completed using the available 2008 LiDAR data to identify areas where significant surface ponding areas exist. This information will assist in determining discharges from the project area and identifying and verifying critical problem areas.

2. Prepare and Evaluate Existing Drainage Area Maps

Existing conditions drainage area maps will be developed for each of the receiving storm sewer trunklines. Overall and inlet level drainage areas will be developed for storm sewers within the project limits. Trunkline analysis point drainage areas will be delineated for storm sewer systems outside the project limits. The Consultant will determine the existing conditions drainage area boundaries based on the best available data. Means for determining drainage area boundaries include but are not limited to as-built information, LiDAR, field visits, City of Houston GIMS data, and the City's Comprehensive Drainage Plan (CDP). Extreme event and offsite drainage areas developed as part of Task I.B.1 (Analyze Overland Sheetflow Patterns) will be included as part of the existing drainage area map.

3. Existing Conditions Analysis

A model of the existing storm sewer system will be constructed and analyzed for the 2-year and 100-year frequency storm events. The model will build on the InfoWorks model developed for the TIRZ 17 Regional Drainage Study (RDS) – Updated March 2014. The existing conditions RDS model will be updated to reflect the detailed survey collected as part of this PER initiative. System deficiencies will be identified and documented. The cause or source of the deficiency will be determined and documented as well. Interaction and influence to and from the surrounding residential and commercial areas will be assessed and documented.

4. Drainage Impact Analysis

Drainage impacts associated with the proposed roadway improvement will be evaluated and mitigation measures necessary to ensure no adverse impacts will be proposed. Potential drainage impacts associated with the proposed improvements including effects of additional increased impervious cover, a reduction in storm water storage, and modifications to overland sheetflow patterns. The proposed roadway will discharge the Beltway 8 drainage system and directly to W153-00-00 or Buffalo Bayou. These systems are regulated by TxDOT. Zero increase in peak runoff, water surface elevations, and flow volume will be allowed.

- a. **Increased Impervious Cover** – An evaluation of the existing and proposed impervious cover will be performed to identify the changes associated with the proposed roadway improvements.
- b. **Changes in Storage** – The proposed roadway, anticipated to be a curb and gutter cross section, will be evaluated to account for any changes in storage.
- c. **Overland Sheetflow** – The proposed roadway improvements will be evaluated to identify and quantify overland sheetflow impacts.
- d. **Mitigation Options** – Mitigation option concepts will be developed to determine the most effective means (both cost and function) of eliminating potential impacts. Potential mitigation options include; (1) storage beneath the roadway in the form of oversized or additional storm sewer, (2) above ground offsite storage, and (3) sub-surface offsite storage.

5. Proposed System Analysis

Multiple improvement options will be evaluated and presented to the TIRZ board for review and selection. A recommended alternative will be identified that meets the City's criteria and cost effectively maximizes benefit for the region. Necessary sizing, location, elevation, and cover requirements of the proposed trunkline will be determined for each alternative. The inlets and laterals will be refined as necessary to ensure sufficient intake & conduit capacity and to maintain a hydraulic grade line (HGL) below or at the gutter elevation of the roadway for the length of the project for the 2-year event. The proposed storm sewer system will be evaluated and improved in order to meet overland flow and Maximum Ponding Elevation criteria for the 100-year event. A 2 dimensional model of the proposed storm sewer system(s) will be constructed and analyzed for the 2-year and 100-year frequencies.

- a. **Minimum City of Houston Criteria System** – The systems will be designed to meet the minimum City of Houston Criteria. The proposed improvement will be self-mitigating, meaning the systems will not increase discharge to the receiving channel or drainage system.
- b. **Regional Improvement System** – The regional improvements identified in the RDS update will be evaluated in detail with the incorporated project survey. Restricted outfall and non-restricted outfall improvement scenarios will be evaluated. Two alternative solutions will be evaluated for the W153-00-00 watershed.
- c. **Ultimate System** – The maximum constructible box size will be determined for the each of the storm sewer sections. A simulation will be performed to evaluate the benefit of the maximum storm sewer.

6. Improvement Option Cost Estimates

Planning level cost estimates will be prepared to assist in determining the value of each improvement option.

7. Proposed Conditions Storm Sewer Drainage Area Map Sheets

The Engineer shall provide proposed conditions storm sewer drainage area maps for the preferred alternative at both the overall and inlet level. The overall drainage area map will consist of drainage areas, 2-year storm sewer runoff rates, and flow direction arrows, and will include a preliminary layout of all proposed storm sewer trunk lines, inlets, and ditches. Drainage areas will be delineated based on the improvements evaluated in the Proposed System Analysis.

8. 30% Plan and Profile Drawing Support – Drainage

The Engineer will participate in the production and engineering of the 30% plan and profile drawings. Specifically, the engineer will design and generate the recommended proposed drainage system. Utility conflicts will be identified and evaluated for effective solutions.

D. PROJECT MANAGEMENT, COORDINATION & DELIVERABLES

1. Project Management / Project Controls

Project management activities are ongoing through the period of the contract and include items such as participation in the crafting of the Project Management Plan, preparing contract correspondence, transmitting deliverables, documenting the quality control process, and other project oversight activities. The final activity of this task is the overall project closeout, which includes a meeting with the TIRZ Project Manager.

2. Agency Coordination

LAN will arrange for and participate in a kickoff meeting with officials from the City of Houston's Department of Public Works & Engineering (PW&E). During this meeting, City staff will have the opportunity to review and comment on the planned data collection and analysis efforts. The two analysis years (Opening Year and Design Year) will be determined from this initial meeting with City staff.

Throughout the project, coordination meetings will be organized as necessary with the City of Houston. Updates will be given at the monthly board meetings. Preliminary plan and profile drawings will be sent to private utility companies for review and comment. Coordination with TxDOT will include meetings with their roadway department to discuss geometry and construction issues at the Beltway 8 intersection, and with the drainage department to demonstrate no adverse impact to TxDOT drainage system. Extensive coordination with HCFCD is expected as the proposed project will outfall to the HCFCD maintained W153-00-00.

3. Prepare Preliminary Engineering Report

The Preliminary Engineering Report will be prepared in accordance with City of Houston *Infrastructure Design Manual dated July 2012* and City of Houston PER Requirements included as Exhibit D.

4. Quality Assurance / Quality Control

A thorough Quality Assurance/Quality Control (QA/QC) Plan will be implemented to ensure overall project constructability, cost estimate accuracy, and design conformance with industry standards and client-specific requirements and preferences. The LAN QA/QC Plan mandates an extensive review process that will occur at multiple design milestones throughout the duration of the project, and includes the specific procedures to be followed by third-party technical reviewers, itemized review checklists, and guidelines for incorporating reviewer comments. The multi-staged review process will result in the early identification of design concerns and allow the designer ample opportunity to seek resolution and/or clarification from the client.

II. ADDITIONAL ENGINEERING SERVICES

Additional Services fees are summarized below.

A. TRAFFIC ENGINEERING & PLANNING & OTHER SERVICES

1. Site Visit & Data Collection

LAN will conduct a field visit to review existing intersection geometry and traffic control within the study area. The following data collection activities are anticipated:

Traffic Data Collection	Type	Duration
Memorial Drive at Beltway 8 NB and SB Frontage Roads	AM/PM Peak Periods TMC	1 day
Memorial Drive at West Bough Lane/Broken Bough Drive	AM/PM Peak Periods TMC	1 day
Memorial Drive at Boheme Drive	AM/PM Peak Periods TMC	1 day
Memorial Drive at Hollow Drive	AM/PM Peak Periods TMC	1 day
Memorial Drive at Benignus Road	AM/PM Peak Periods TMC	1 day
Memorial Drive at Frostwood Drive	AM/PM Peak Periods TMC	1 day
Memorial Drive at Gessner Road	AM/PM Peak Periods TMC	1 day
EB Memorial Drive West of Beltway 8	24-hour Volume	1 day
SB Beltway 8 Frontage Road North of Memorial Drive	24-hour Volume	1 day
NB Beltway 8 Frontage Road South of Memorial Drive	24-hour Volume	1 day
WB Memorial Drive East of Beltway 8	24-hour Volume	1 day
EB Memorial Drive West of West Bough Lane	24-hour Volume	1 day
SB West Bough Lane North of Memorial Drive	24-hour Volume	1 day
NB Broken Bough Drive South of Memorial Drive	24-hour Volume	1 day
WB Memorial Drive East of West Bough Lane	24-hour Volume	1 day
SB Memorial Drive North of Boheme Drive	24-hour Volume	1 day
EB Boheme Drive West of Memorial Drive	24-hour Volume	1 day
EB Memorial Drive West of Hollow Drive	24-hour Volume	1 day
WB Memorial Drive East of Hollow Drive	24-hour Volume	1 day
EB Memorial Drive West of Benignus Road	24-hour Volume	1 day
WB Memorial Drive East of Benignus Road	24-hour Volume	1 day
SB Benignus north of Memorial Drive	24-hour Volume	1 day
EB Memorial Drive West of Gessner Road	24-hour Volume	1 day
SB Gessner Road North of Memorial Drive	24-hour Volume	1 day
NB Gessner Road South of Memorial Drive	24-hour Volume	1 day
WB Memorial Drive East of Gessner Drive	24-hour Volume	1 day

TMC – Turning Movement Count

In addition, LAN will obtain the latest travel demand forecasts from H-GAC to adjust the collected traffic data to the PER required Opening and Design Years (to be determined). LAN will consult with Houston METRO officials regarding existing and planned transit stops in the corridor vicinity and identify any infrastructure needs or accommodations to support

anticipated services. LAN will also contact the City of Houston Planning & Development Department to determine if any development plats or building permits have been approved.

2. Evaluation of Geometric Conditions

LAN will evaluate geometric modifications to Memorial Drive, between and including the intersections of Beltway 8 and Gessner Road. Alternative improvements to better manage access from cross streets and driveway entrances and to alleviate any congested conditions will be identified. The initial build alternative will be derived from the proposed cross-section and design standards of Memorial Drive prepared by LAN during the development of this scope, taking into consideration access requirements of existing and approved land uses. Synchro will be used to model the study area and allow for practical comparison of alternatives.

During the course of the evaluation, LAN staff will confer with the TIRZ Project Manager, City of Houston staff and affected property owners to review conceptual improvements and analysis results. LAN will provide technical support for up to four such meetings.

LAN shall examine the following geometric scenarios:

- a. Existing Conditions
- b. Opening Year No Build Conditions
- c. Opening Year Alternative 1 Conditions
- d. Opening Year Alternative 2 Conditions
- e. Design Year No Build Conditions
- f. Design Year Alternative 1 Conditions
- g. Design Year Alternative 2 Conditions

Existing Conditions shall consist of the existing roadway network and traffic volumes to calibrate the model.

No Build Conditions shall consist of the existing roadway network modeled with design year traffic volumes for AM and PM weekday peak hour conditions (using Year 2015 volumes from the North-South Mobility study and growth rates from H-GAC travel demand forecasts) to reflect future year conditions with no changes to roadway geometry.

Alternative 1 Conditions shall consist of the initial build condition as identified above.

Alternative 2 Conditions shall incorporate any improvements to Alternative 1 as determined by traffic operations analysis and consultation with affected property owners.

All study results will be presented in the PER. The results will be quantified using the following measures of effectiveness:

- Average speeds
- Queues
- Travel times
- Levels-of-Service

B. Develop Conceptual Traffic Control Plans

The construction sequence and a traffic control concept that will minimize the impact to the region's traffic movement pattern will be prepared. Detours, phasing, sequencing, construction zones, temporary pavement requirements and temporary signalization will be identified. Potential disruptions to local businesses and measures to address access during construction will be evaluated.

C. Public Meeting

TIRZ 17 has identified Memorial Drive to be one of their key capital improvement projects to focus on in FY 2015 as it would make an immediate significant impact to the community. As part of the TIRZ 17's ongoing efforts to keep the community informed, a public meeting to present the plans for Memorial Drive will be held. The objective of the event is to update the public on the project and to solicit input from the public. The event will include multiple informational stations to update the public on the project's drainage and roadway recommendations. The informational stations will be interactive to allow the meeting participants to provide input and engage the engineers to ask and answer questions. The date and location of the event is TBD.

D. Coordination with Bunker Hill Village

LAN will arrange for and participate in meetings with officials from the City of Bunker Hill Village as necessary. During this meeting, the TIRZ 17 neighbor will have the opportunity to understand and comment on the project and explore potential opportunities of partnership.

E. Coordination with Stakeholders (Residential/Business)

LAN will coordinate with the adjacent residential HOAs (e.g. The Hollow HOA, which were severely flooded during the April 2009 event.) and adjacent business owners.

F. Coordination with Landscape Architect

LAN will work and coordinate with the Landscape Architect to re-create Memorial Drive as a safe, convenient and attractive road for the adjacent neighborhoods and businesses. Cross sectional exhibits will be developed to better depict the vision for Memorial Drive for the Public meeting.

G. Assessment of Adjacent Brick Walls on Right-of-Way Edge

A number of brick walls along the roadway section of Memorial Drive currently exist. The walls will be impacted with the Memorial Drive construction activities. Therefore, during the PER LAN will inspect the walls, develop details and cost estimates for the replacement if needed for the HOA, City and Board to agree to the type of replacement and the cost to the TIRZ.

H. Prepare and Participate in Technical Review Committee (TRC) Meeting

- a. The purpose of the TRC meeting is for the Engineer to present the proposed improvements to the different City of Houston Departments for comment and approval. A Microsoft Power Point presentation will be prepared and will include an executive summary of the project showing the alternatives, recommendations, and estimated construction costs. A summary of the TRC meeting will record all decisions and action items.
- b. A revised estimate of probable construction cost will be submitted based on the outcome of the TRC. The PER will be revised in response to the Technical Review Committee's record of decisions and action items. The final PER will be submitted in PDF Format on a CD in a single file with a Table of Contents.

III. SUBCONTRACTED SERVICES

Additional Services are summarized below.

A. TREE INVENTORY

The proposed tree inventory for the preliminary engineering report effort will be provided by C.N. Koehl Urban Forestry, Inc. A detailed proposal for this work is included as Exhibit C.

B. TOPOGRAPHIC SURVEY SERVICES

The proposed topographic survey required for the design effort will be performed by Kuo & Associates, Inc. A detailed proposal for this work is included as Exhibit D.

C. GEOTECHNICAL INVESTIGATION

The proposed geotechnical investigation required for the design effort will be provided by Aviles Engineering Corporation. A detailed proposal for this work is included as Exhibit E.

D. TRAFFIC DATA COLLECTION

The proposed traffic data collection and reporting required for the design effort will be provided by C.J. Hensch & Associates. The traffic data conducted is shown on p.5 & 6 of the Scope of Services.

I. ENVIRONMENTAL SITE ASSESSMENT

The proposed environmental site assessment required for the design effort will be prepared by part of the PER efforts.

Exhibit B
Memorial Drive Drainage and Mobility Improvement Project (CIP # T-1731B)
LEVEL OF EFFORT

PHASE I - Preliminary Engineering Report

I. BASIC ENGINEERING SERVICES

DESCRIPTION OF WORK TASKS	Sr. PROJ MGR	PROJ MGR	PROJECT ENGINEER	GRAD ENGINEER	CADD TECH	ADMIN ASSNT	TOTAL HOURS	LABOR COSTS
A. Roadway Design and Planning Services								
1 Site Visit and Data Collection	0	0	4	8	0	0	12	\$ 1,560.00
2 Establish Roadway Baseline/Project Control	1	2	12	24	32	0	71	\$ 8,135.00
3 Develop Plan and Profile Sheets (30% Drawings)	1	12	24	60	140	0	237	\$ 25,725.00
4 Alignment Definition/Develop Right of Way Map	2	8	18	32	40	0	100	\$ 11,990.00
5 Develop Typical Sections (Existing and Proposed)	0	2	8	16	24	0	50	\$ 5,630.00
6 Develop Preliminary Cost Estimates	0	1	4	12	0	0	17	\$ 2,215.00
Total	4	25	70	152	236	0	487	\$ 55,255.00
B. Public Utility Design and Planning Services (Water/Sanitary)								
1 Site Visit and Data Collection	0	0	0	0	3	0	3	\$ 270.00
2 Develop Plan and Profile Sheets	0	16	36	48	72	0	172	\$ 20,440.00
3 Investigations for Existing Public and Private Utilities	0	0	0	16	4	0	20	\$ 2,280.00
4 Develop Construction Cost Estimate	0	4	8	24	0	0	36	\$ 4,780.00
Total	0	20	44	88	79	0	231	\$ 27,770.00
C. Drainage Design and Analysis Services								
1 Site Visit and Data Collection	0	0	2	6	0	0	8	\$ 1,020.00
2 Analyze Overland Flow Patterns	0	1	2	4	0	0	7	\$ 955.00
3 Prepare and Evaluate Existing Drainage Area Map (6 Sheets)	0	4	12	24	30	0	70	\$ 8,080.00
4 Existing Conditions Analysis	2	6	16	32	0	0	56	\$ 7,740.00
5 Drainage Impact Analysis								
a. Increased Impervious Cover	0	2	6	6	4	0	18	\$ 2,330.00
b. Changes in Storage	0	1	4	6	8	0	19	\$ 2,215.00
c. Overland Sheetflow	2	4	16	4	0	0	26	\$ 4,030.00
d. Mitigation Options	2	4	8	8	0	0	22	\$ 3,310.00
6 Proposed System Analysis								
a. Minimum City Criteria	2	6	18	8	0	0	34	\$ 5,160.00
b Regional Improvement System	2	8	30	16	0	0	56	\$ 8,270.00
c. Ultimate System	2	4	18	8	6	0	38	\$ 5,350.00
7 Improvement option cost Estimates	0	2	4	8	0	0	14	\$ 1,910.00
8 Proposed Conditions Storm Sewer Drainage Area Map Sheets (6 Sheets)	0	4	8	24	20	0	56	\$ 6,580.00
9 30% Plan and Profile Drawing Support – Drainage (12 Sheets)	2	16	16	24	40	0	98	\$ 12,130.00
Total	14	62	160	178	108	0	522	\$ 69,080.00
D. Project Management, Deliverables								
1 Project Management / Project Controls	2	30	8	8	0	32	80	\$ 10,580.00
2 Agency Coordination (City of Houston, TxDOT, HCFCDD)	10	28	10	52	0	9	109	\$ 15,655.00
3 Preliminary Engineering Report Preparation	10	28	36	78	4	9	165	\$ 23,035.00
4 Quality Assurance / Quality Control	6	24	46	6	0	0	82	\$ 13,170.00
Total	28	110	100	144	4	50	436	\$ 62,440.00
TOTAL HOURS	46	217	374	562	427	50	1676	
Contract Labor Rate	\$225.00	\$175.00	\$150.00	\$120.00	\$90.00	\$85.00		
TOTAL LABOR COSTS	\$10,350.00	\$37,975.00	\$56,100.00	\$67,440.00	\$38,430.00	\$4,250.00		\$ 214,545.00

II. ADDITIONAL ENGINEERING SERVICES

DESCRIPTION OF WORK TASKS	Sr. PROJ MGR	PROJ MGR	PROJECT ENGINEER	GRAD ENGINEER	CADD TECH	ADMIN ASSNT	TOTAL HOURS	LABOR COSTS
A. Traffic Engineering & Planning and Other Services								
1 Traffic Project Management / Project Controls	0	24	0	0	0	6	30	\$ 4,710.00
2 Traffic Agency Coordination	0	8	0	0	0	0	8	\$ 1,400.00
3 Traffic Services Site Visit and Data Collection	0	4	0	16	0	0	20	\$ 2,620.00
5 Traffic Services Existing Conditions	0	16	0	24	0	0	40	\$ 5,680.00
6 Traffic Build Alternatives (including roundabout alt)	0	24	0	80	0	0	104	\$ 13,800.00
7 Traffic Services Report Preparation	0	32	0	60	16	0	108	\$ 14,240.00
8 Traffic Related Meetings	0	8	0	8	0	0	16	\$ 2,360.00
9 Traffic Services Quality Assurance / Quality Control	0	24	0	0	0	0	24	\$ 4,200.00
10 Develop Conceptual Traffic Control Plans & Phasing	0	2	6	14	24	0	46	\$ 5,090.00
11 Public Meeting	4	12	32	40	40	0	128	\$ 16,200.00
12 Coordination with Bunker Hill Village	4	8	14	0	24	0	50	\$ 6,560.00
13 Coordination with Stakeholders (Residential/Business)	4	12	18	24	0	0	58	\$ 8,580.00
14 Coordination with Landscape Architect	4	8	16	24	16	0	68	\$ 9,020.00
15 Assessment of Adjacent Brick Walls on Right-of-Way Edge	4	8	12	12	24	0	60	\$ 7,700.00
16 Prepare and Participate in Technical Review Committee Meeting	2	6	4	12	1	0	25	\$ 3,630.00
17 Prepare RDAL and Incorporate TRC Comments into PER	0	1	5	0	0	2	8	\$ 1,095.00
Total	22	197	107	314	145	8	793	\$ 106,885.00

III. SUBCONTRACTED SERVICES

SUBCONTRACTED SERVICES	COST	MARK-UP	TOTAL
A. Tree Inventory (CN Koehl)	\$3,940.00	8%	\$ 4,255.20
B. Topographic Survey Services (Kuo)	\$46,590.00	8%	\$ 50,317.20
C. Geotechnical Engineering Services (Aviles)	\$23,337.00	8%	\$ 25,203.96
D. Traffic Counts (CJ Hensch)	\$8,050.00	8%	\$ 8,694.00
E. Environmental Site Assessment	\$14,780.00	8%	\$ 15,962.40
TOTAL OTHER ENGINEERING SERVICES			\$ 104,432.76

PHASE I PER	
Basic Engineering Services	\$ 214,545.00
Add. Eng. Services/Subs/Expenses	\$ 214,092.76
GRAND TOTAL	\$ 428,637.76

Reimbursable Expenses	QUANTITY	UNIT	COST	TOTAL
Printing and Reproduction	1	LS	\$ 2,000.00	\$ 2,000.00
City of Houston Record Drawings	1	LS	\$ 250.00	\$ 250.00
Deliveries	1	LS	\$ 250.00	\$ 250.00
Mileage	500	MILE	\$ 0.55	\$ 275.00
TOTAL REIMBURSABLE EXPENSES				\$ 2,775.00



June 10, 2014

Mr. Muhammad M. Ali, P.E.
Lockwood, Andrews & Newnam, Inc.
2925 Briarpark Drive, Suite 400
Houston, Texas 77042

Re: Proposal for Urban Forestry Consulting Services on the Memorial Drive Reconstruction from Tallowood to Beltway 8 project.

Dear Mr. Ali,

As per your request, C.N. Koehl Urban Forestry, Inc. proposes to provide Urban Forestry Consulting Services for the design phase of the Memorial Drive Reconstruction from Tallowood to Beltway 8 project. Approximately 7,325 linear feet of project right of way will be evaluated for proposed storm, pavement, sidewalk, and utility construction. Based on your request for proposal, and our most recent experience on past projects working with consulting civil engineers and the City of Houston's Street Tree Ordinance and Urban Forestry department, we propose to provide the following Urban Forestry services:

Phase I-Services for Prior to Preliminary Engineering Report

We will attend a preliminary meeting at LAN's offices to review proposed construction along the project route to gain as clear an understanding as possible on how the construction design may impact adjacent trees. We will then visit the site to evaluate the species, size, condition, and preservation feasibility of trees that may be impacted located along the project route. If a survey has been completed at this point and a drawing is available, the surveyed location of each tree will also be confirmed. Aspects of the construction activity adjacent to each tree along the project right of way will be evaluated to determine impacts on long term tree survival, each tree's structural integrity, and measures that will be needed to comply with the City of Houston's Street Tree Ordinance. The information provided in the preliminary meeting with LAN and information collected in the field will be used to generate a report addressing anticipated construction impacts to adjacent trees, alternatives for compliance with the Street Tree Ordinance, design alternatives that may reduce Street Tree Ordinance compliance costs, and associated costs of each alternative presented. We have allowed for two (2) meetings at LAN's offices and one (1) meeting at Memorial City offices to review our findings and incorporate them into the project planning and design. Proposed fees for Phase 1 are not to exceed limits, as all allocated meetings may not be necessary. Proposed fees for services outlined here are as follows:

Preliminary meeting at LAN office.....	\$237.50
Site evaluation and Report.....	\$2,640.00
CAD drafting fee for creating exhibits for report.....	\$350.00
Two (2) follow up meetings at LAN office.....	\$475.00
One (1) meeting at Memorial City offices.....	\$237.50
Total Phase 1 Fees.....	\$3,940.00

We have utilized the services contained in this proposal on similar projects for The City of West University Place Infrastructure Replacement Program, City of Houston Neighborhood Street Reconstruction Program, City of Houston Surface Water Transmission Program, Houston Storm Water Management Program, City of Missouri City Street Reconstruction, City of Friendswood Street Reconstruction, City of Piney Point Street Reconstruction, City of Sugarland Street Reconstruction, City of Texas City Street Reconstruction, and numerous City of Houston waterline and sewer projects in the past. It is our goal to provide you the most effective, efficient, and value added services we can provide. We are willing to provide services in whatever capacity you deem appropriate.

If this proposal meets with your approval and you would like to retain our services, please forward your standard agreement or a notice to proceed, and we will schedule the work as soon as we receive the plan and profile sheets. We greatly appreciate the opportunity to present this proposal and look forward to working with you on this project. If you have any questions or would like to make any changes, please do not hesitate to call me at 281-391-0022.

Respectfully submitted,



Sarah Koehl
President

August 13, 2014

Muhammad M. Ali, P.E.
 Associate, Project Manager
 Lockwood, Andrews & Newnam, Inc.
 2925 Briarpark Drive, Suite 400
 Houston, TX 77042

Re: Memorial Dr. Improvement from Beltway 8 to City of Houston/City of Bunker Hill Village Limit
 Topographic Surveying

Dear Mr. Ali:

Kuo & Associates, Inc. is pleased to submit this proposal to perform topographic survey services for the above referenced project. Survey will be done along Memorial Drive and on its side streets for the limits as listed below:

Streets	From	To	Quantity (LF)
Memorial	west line of north bound feeder of Sam Houston Pkwy	Tallowood Drive	5,900
Broken Bough	Memorial	100' to the south	100
W. Bough	Memorial	100' to the north	100
Old Oaks	Memorial	100' to the east	100
Huntingwick	Memorial	100' to the east	100
Boheme	Memorial	100' to the west	100
Memorial Bend	Memorial	100' to the east	100
Hollow Drive	Memorial	100' to the north	100
Somerset Place	Memorial	100' to the south	100
Legend	Memorial	100' to the south	100
Tallowood	Memorial	100' to the north	100
Total			6,900

Attached exhibit shows the limits of surveying for the above listed table.

The scope of work and fee will be as follows:

SCOPE OF WORK

Survey shall conform to all requirements as outlined in the latest City of Houston Design Manual, Chapter 2 – Survey Requirements and the City of Houston (COH) Code of Ordinances, Chapter 33, Article IV. To our understanding, the scope for survey in general will be including the following items in meeting the requirements:

1. Horizontal and vertical controls will be established and tied to the Texas State Plane Coordinate System, South Central Zone NAD 83 and datum NAVD 88. According to the requirement of the City, the datum will be tied to the City of Houston CORS datum based on the NGS CORS (GPS) monument observations. The nearby TSARP monument will also be tied to the survey and an equation will be provided in between surveyed elevation (on the CORS datum) and published elevation of the TSARP (on NAVD 88, 2001 adj).
2. Cross sections will be surveyed at every 100 feet interval along the project route. Additional cross sections will be surveyed at the curve sections of the road as necessary
3. All planimetric features will be surveyed along the road right-of-way within the limit specified in the Chapter 2 of the City design Manual. The survey will be extended on all sides of street intersections at least to 100' as per the requirements of design manual, unless otherwise instructed.
4. Survey all trees of 3" or larger caliper size.
5. All visible existing utilities (i.e. manholes, culverts, power poles, etc.) will be located and pipe size and flow line measure downs in the manholes and inlets (that can be opened) will be obtained.
6. Texas one-call system will be notified and pipeline companies will be contacted to probe and mark their pipeline (if any) locations to be tied to the survey.
7. Attempt will be made to recover and verify sufficient monumentation along the existing roadway to establish estimated right-of-way lines for topographic surveying scope. Task of establishing estimated ROW may involve some limited abstracting and deed research, however, detail boundary category survey is excluded in determination
8. Plan view drawings will be prepared containing all topographic information and visible utility features according to the COH standards in Microstation and AutoCAD format.
9. A survey control map will be prepared to the COH standard showing swing ties to traverse and baseline points as well as TBM's. Sketch of each City of Houston monuments either found or set will be included on the survey control map. The survey control map will be signed and sealed by a responsible professional in charge of the project.
10. Signed and sealed field books containing notes as well as ASCII files of point numbers, coordinates, and descriptions will be provided.
11. Boreholes will be located in the field and an overall layout plan will be prepared to show their location and elevation in DGN or any other compatible format.
12. New City of Houston monuments will be established or/and existing City monuments (if any) will be recovered and updated to the new datum as per the City of Houston Ordinance and in accordance to Design Manual Section 2.06 D.

Probing or any excavation work to obtain utility information is beyond the scope of project and also in compliance with the City of Houston requirements, electric and communication manholes will not be opened under the scope of this project. The information on electric and communication cable/conduit lines are typically shown based on the available record drawings.

The proposal excludes utility record research and profiles of utilities, which are not visible on the ground. A separate proposal is provided along with this one for such services.

FEE AND SCHEDULE:

The fee for the above-described work is estimated to be **\$38,300.00** as shown itemized in the table below:

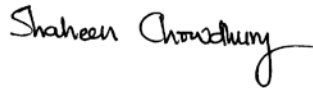
Items	Description	Quantity	Rate	Fee
Item 1 to 11	Road Topo Surveying	6,900 LF	\$5.00/LF *	\$ 34,500.00
Item 12	Establishing COH Monument	2 monuments	\$1,900.00/Each *	\$ 3,800.00
Total				\$ 38,300.00

* See detail breakdown in the attached pages

We estimate to complete the above work in 45 calendar days upon your authorization to proceed.

We appreciate this opportunity to submit this proposal. If you need further information, please do not hesitate to contact me.

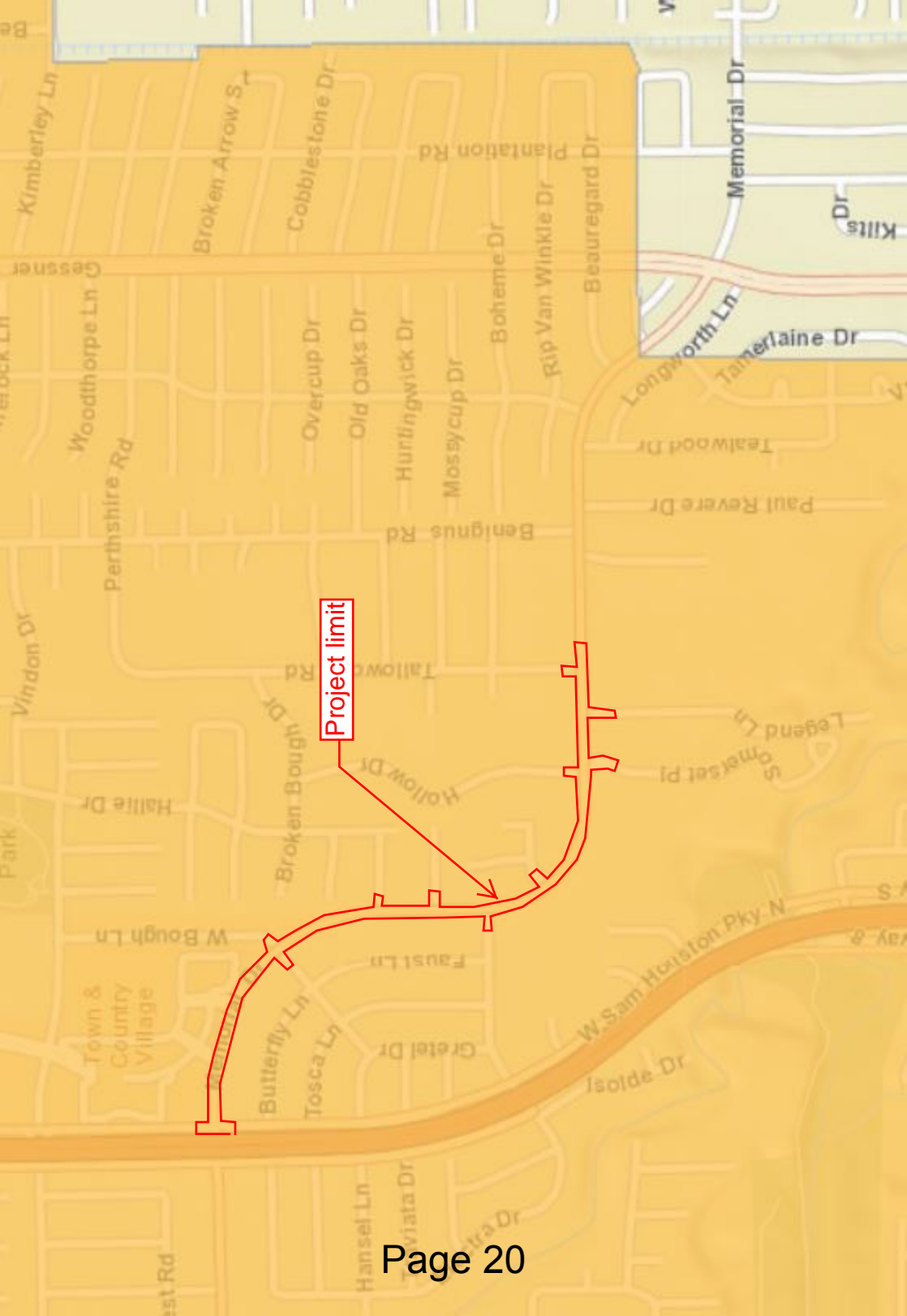
Sincerely,



Shaheen Chowdhury, P.E., R.P.L.S.
President

Level of Efforts for Road Survey									
Survey Tasks	sub tasks	Principal \$150.00	RPLS \$125.00	SIT \$90.00	CADD \$70.00	Crew \$134.00	Hrs	Cost	Total
Survey Control	Setting controls			1		4	5	\$626.00	\$6,630.00
	Horizontal control work		1	2		6	9	\$1,109.00	
	Vertical control work		1	2		12	15	\$1,913.00	
	Preparing Survey control map		2	4	16		22	\$1,730.00	
	Setting center line			2		8	10	\$1,252.00	
Topo Survey	One Call coordination			2			2	\$180.00	\$26,595.00
	Limited abstracting for ROW topo survey							\$500.00	
	Limited ROW research for scope of topo survey		8	16			24	\$2,440.00	
	Surveying roadway & topo features		2	4		110	116	\$15,350.00	
	Manhole inverts		1	4		8	13	\$1,557.00	
	Borehole survey			2		4	6	\$716.00	
	Limited traffic control							\$2,500.00	
	QA/QC		8	8	8	8	32	\$3,352.00	
Project Management	Proj Management	4	8					\$1,600.00	\$1,600.00
Total									\$34,825.00
Cost per LF									\$5.05 say \$5.00/LF

Level of Efforts for Setting COH Monument (Each)									
Setting COH Monument			2	4	4	8	18	\$1,962.00	\$1,962.00



Project limit

August 13, 2014

Muhammad M. Ali, P.E.
Associate, Project Manager
Lockwood, Andrews & Newnam, Inc.
2925 Briarpark Drive, Suite 400
Houston, TX 77042

Re: Memorial Dr. Improvement from Beltway 8 to City of Houston/City of Bunker Hill Village Limit
CAD Services to prepare basemap (utility plan and profile)

Dear Mr. Ali:

Kuo & Associates, Inc. is pleased to submit this proposal to perform CAD services to prepare utility plan and profile out of the surveyed information for the above referenced project. Topo and utility Plan drawing will be prepared along Memorial Drive and side streets (as shown below) and profile drawing will be prepared along Memorial Drive only.

Streets	From	To	Quantity (LF)
Memorial	west line of north bound feeder of Sam Houston Pkwy	Tallowood Dr.	5,900
Broken Bough	Memorial	100' to the south	100
W. Bough	Memorial	100' to the north	100
Old Oaks	Memorial	100' to the east	100
Huntingwick	Memorial	100' to the east	100
Boheme	Memorial	100' to the west	100
Memorial Bend	Memorial	100' to the east	100
Hollow Drive	Memorial	100' to the north	100
Somerset Place	Memorial	100' to the south	100
Legend	Memorial	100' to the south	100
Tallowood	Memorial	100' to the north	100
Total			6,900

Attached exhibit shows the limits for the above Tasks.

Scope or work and estimated fee & schedule are described below:

SCOPE OF WORK

We will be performing the following tasks under the scope:

- Coordinate with private utility companies and City of Houston for record drawings
- Perform utility research and delineation of underground utility lines in the plan view of Memorial Drive and side streets from available record drawing and surveyed information
- Delineate ROW with lots/abstracting information/addresses for topo survey

- Prepare profile for ground lines corresponding to the center line of the street, center line of the ditch/curb lines, right-of-way lines
- Prepare profile view of existing utilities along Memorial Drive from available record and field information

The deliverable will be in Microstation DGN or AutoCAD format as required for your design work.

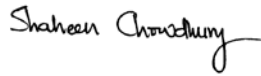
FEE & SCHEDULE:

The fee for the above-described work will be **\$8,290.00** as shown itemized in the attached table.

We anticipate completing the work within 60 days upon receiving notice to proceed/beginning of survey work.

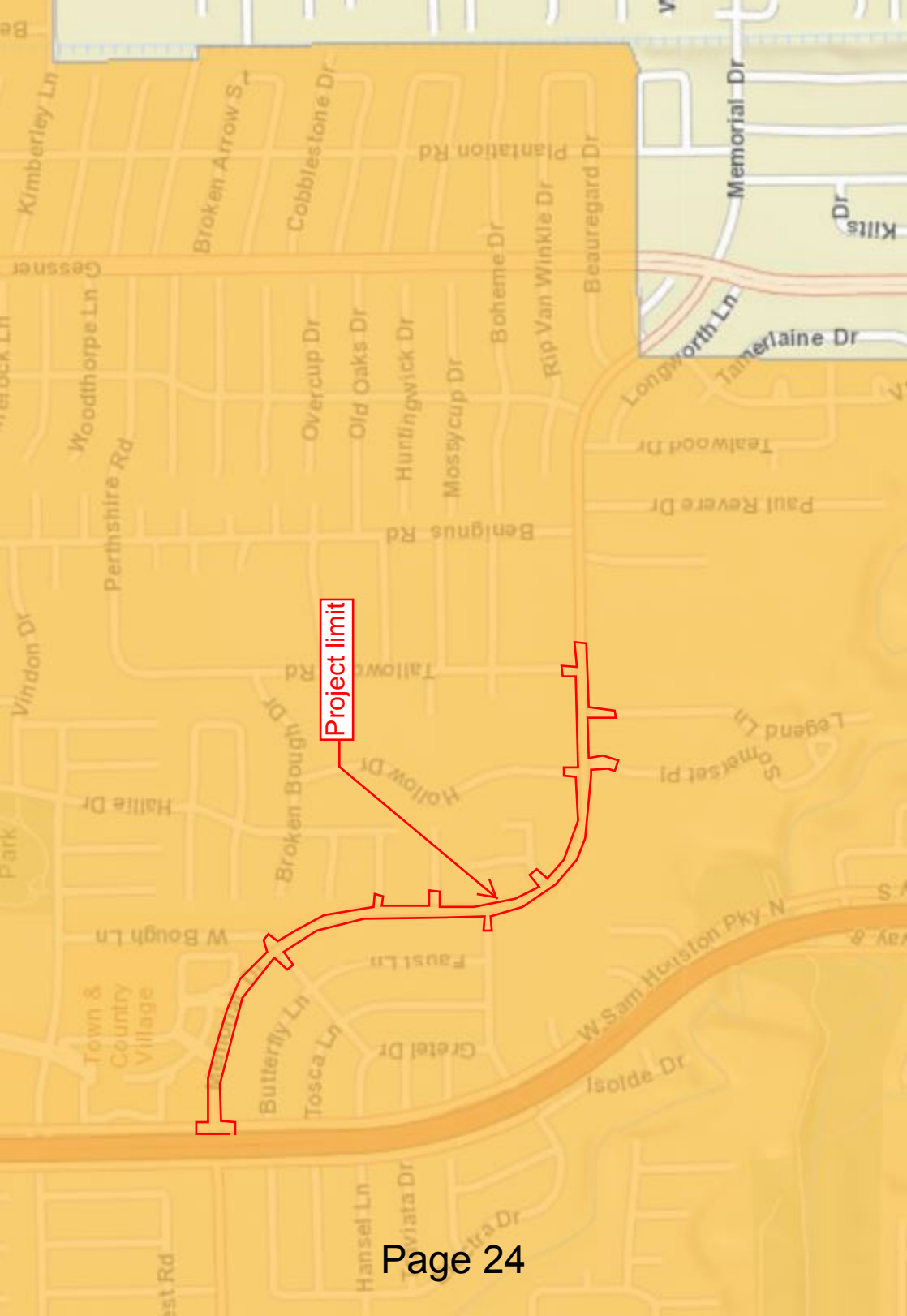
We appreciate this opportunity to submit this proposal. If you need further information, please do not hesitate to contact me.

Regards,



Shaheen Chowdhury, P.E., R.P.L.S.
President

Level of Efforts for Preparing Plan & Profile Drawing							
Tasks	Sub tasks	RPLS	SIT	CADD	Hrs	Total	Total
		\$125.00	\$90.00	\$70.00			
Plan & Profile	Utility record information collection and research		8		8	\$720.00	
	delineation of public and private utility lines on the plan view of Memorial Drive and side streets		4	48	52	\$3,720.00	
	Ground profiles at center line of the ditch/curb, center line and right-of-way lines of road			8	8	\$560.00	
	Delineation of utility lines in the profile view along Memorial Drive only			24	24	\$1,680.00	
	QA/QC	8	4		12	\$1,360.00	
	Project Management	2			2	\$250.00	
Total							\$8,290.00



Project limit



August 13, 2014

Mr. Muhammad Ali, P.E.
Lockwood, Andrews, and Newnam, Inc.
2925 Briarpark Drive, Suite 400
Houston, Texas 77042

Re: Revised Geotechnical Investigation Proposal
TIRZ 17 Reconstruction of Memorial Drive between West Sam Houston Parkway and Tallowood Road
Houston, Texas
AEC Proposal No. G2014-06-05R2

Dear Mr. Ali,

Aviles Engineering Corporation (AEC) is pleased to present this revised geotechnical investigation proposal for the proposed Tax Increment Reinvestment Zone (TIRZ) 17 reconstruction of Memorial Drive, between the West Sam Houston Parkway northbound frontage road and Tallowood Road, in Houston, Texas (Houston/Harris County Key Map 489G, H, M, and 490J). The proposed improvements include: (i) reconstruction of Memorial Drive with new concrete pavement; and (ii) installation/replacement of waterlines, storm sewers, and sanitary sewers.

According to Lockwood, Andrews, and Newnam, Inc. (LAN), the invert depth of the proposed utilities is not currently available, but will be similar to the invert depth of the existing utilities along the alignment. Based on COH GIMS maps, the maximum invert depth of existing waterline, storm sewer, and sanitary sewer lines along the alignment vary from approximately 5 to 14 feet. Based on GIMS, the channel depth where Memorial Drive crosses Harris County Flood Control District (HCFCD) Unit W153-00-00 is approximately 18 feet. According to LAN, the utilities will primarily be installed by open cut method.

Boring locations and depths for the reconstruction of Memorial Drive were selected in general accordance with Chapter 11 of the 2012 City of Houston Infrastructure Design Manual. The proposed boring spacing is 500 feet. The proposed boring depths are based on available utility invert depth information from the COH GIMS system. AEC should be notified once the design invert depths of the utilities are available, so that our boring depths (and project fee) can be revised, if necessary.

AEC proposes to drill a total of nine borings along the project alignment ranging from 25 to 40 feet. The total drilling footage is 240 feet. We will also install two piezometers along the alignment, ranging from 20 to 25 feet. A Boring Location Plan is included in the Attachments. We will perform a site reconnaissance prior to drilling and mark boring locations. AEC requests that any existing underground utilities be located by the property owner's representative prior to arrival of the drill rig. We will also contact the Texas 811 System to confirm utility locations; however, Texas 811 does not locate water, sanitary, or storm sewer lines.

Based on aerial photographs, AEC assumes that the boring locations can be accessed with a truck-mounted drill rig. Existing asphalt pavement at the boring locations will be cored prior to arrival of the drill rig. AEC will use a police officer to provide traffic control along Memorial Drive. During drilling, we will collect samples continuously at 2 foot intervals from the ground surface to a depth of 20 feet in the borings, and then at 5 foot intervals thereafter to the boring termination depths. Undisturbed samples will be obtained of cohesive soils by pushing a Shelby tube (ASTM D-1587). Standard Penetration Test samples will be obtained of granular soils (ASTM D-1586). Representative portions of all soil samples

will be sealed, packaged, and transported to our laboratory. Water level readings will be noted during drilling and upon completion of drilling. After completion of drilling, Borings B-2 and B-8 will be converted to piezometers. Upon completion of drilling, boreholes located on asphalt pavement will be grouted with cement-bentonite and the pavement surface patched with asphalt. An additional water reading will be obtained after 30 days in the piezometers, after which the piezometers will be plugged and abandoned.

Laboratory testing may consist of moisture contents, Atterberg limits, percentage passing No. 200 sieve, sieve analysis, and unconsolidated-undrained triaxial (UU) tests depending on the soil types encountered. AEC's geologist will perform a preliminary fault study, including a site visit and a desktop document review. We will analyze the field and laboratory testing data to provide geotechnical and construction recommendations in an engineering report for the proposed improvements, including: (i) pavement thickness design and subgrade preparation; and (ii) installation of underground utilities by open cut method, including pipe loading, trenching and shoring, bedding and backfill.

The estimated lump sum fee for our services is **\$23,337.00**. An itemized fee estimate is included in the Attachments. The fee includes one mob/demob of a truck-mounted drill rig, concrete coring, a site visit to mark the borings, and 3 copies of the engineering report. Additional copies will be invoiced at \$30 each. Buggy-rig mobilization, fence/gate removal, restoration of the site to its original condition, standby time, surveying, plan/specification review, environmental assessment, and attendance at meetings are not included in the above fee. To help us maintain the estimated schedule and avoid additional fees, we request that we be provided with all pertinent project details, drawings and any proposed/preferred geotechnical-related design details at the onset of the project.

We will perform a site reconnaissance and mark the proposed boring locations 2 business days after the required project drawings, the signed contract, and notice-to-proceed are received. Weather permitting and assuming no field delays, the drilling should take 2 to 3 days. The laboratory tests will require about 3 weeks to complete after drilling is finished. We anticipate providing the final geotechnical report about 2 weeks after the laboratory test results are complete.

If any of the project details described in this proposal are incorrect or the scope described or the assumptions listed need to be revised, please inform us immediately so we can revise the proposal as necessary. Please sign and return a copy of this proposal to authorize AEC to proceed with the services. We appreciate the opportunity to present this proposal, and look forward to working with you.

Respectfully submitted,
Aviles Engineering Corporation
(TBPE Firm Registration No. F-42)



Wilber L. Wang, M.Eng., P.E.
Project Engineer



Shou Ting Hu, M.S.C.E., P.E.
Principal Engineer

AGREED TO THIS _____ DAY OF _____, _____
PRINTED NAME: _____
SIGNATURE: _____
TITLE: _____
FIRM: _____

GEOTECHNICAL INVESTIGATION TERMS AND CONDITIONS

STANDARD OF CARE

The CLIENT recognizes that actual subsurface conditions can vary from those observed and/or encountered at locations where borings, surveys, or explorations are made, and that site conditions may change with time. Data interpretations and recommendations by AVILES ENGINEERING will be based solely on information available to the AVILES ENGINEERING during the investigation. AVILES ENGINEERING is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.

The CLIENT should expect AVILES ENGINEERING to perform Services under this PROPOSAL/AGREEMENT in a manner consistent with the level of care and skill ordinarily exercised by members of the engineering profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, expressed or implied, is made.

SCOPE OF SERVICES

AVILES ENGINEERING will develop a scope of services based on the project information provided by the CLIENT. AVILES ENGINEERING shall not be responsible for problems arising due to inadequate number of borings and/or depths dictated or required by others or inadequate engineering analyses, if the CLIENT reduces the scope of services and/or provides insufficient or invalid project or other relevant information to AVILES ENGINEERING. In the event the CLIENT or his representative orders work described in this PROPOSAL/AGREEMENT, that action shall constitute the CLIENT's acceptance of this PROPOSAL/AGREEMENT and its terms and conditions

SITE ACCESS AND SITE CONDITIONS

The CLIENT will grant or obtain free access to the site for all equipment and personnel necessary for AVILES ENGINEERING to perform the services described in this PROPOSAL/AGREEMENT, as well as provide location data for all below and above ground structures, pipelines and utilities. For such items encountered, not called to the attention of AVILES ENGINEERING, the CLIENT shall assume responsibility for any resultant damages. AVILES ENGINEERING will take reasonable precautions to minimize damage to the site, but it is understood by the CLIENT that, in the normal course of work, some damage may occur and the correction of such damage is not part of this AGREEMENT. The CLIENT will notify AVILES ENGINEERING of any known toxic and/or hazardous materials on site and shall assume responsibility for the cost of occurrences due to unknown toxic and/or hazardous materials on site.

BILLING AND PAYMENT

The CLIENT will pay AVILES ENGINEERING the lump sum amount(s) shown in the PROPOSAL/AGREEMENT. Invoices will be submitted to the CLIENT by AVILES ENGINEERING, and will be due and payable within thirty (30) days of the invoice date. CLIENT will pay an additional charge of 1.5 percent per month on any delinquent amount, and agrees to pay attorney's fees and/or other costs involved in any required collection activity.

LIMITATION OF LIABILITY / INDEMNIFICATION

If at any time, there shall be or arise any liability on the part of AVILES ENGINEERING by virtue of this Agreement or because of the relation hereby established, whether due to the negligence of AVILES ENGINEERING (including gross negligence) or otherwise, such liability is and shall be limited to a sum equal in amount to the fee charged by AVILES ENGINEERING. AVILES ENGINEERING and CLIENT agree to indemnify each other from any claims, etc., including attorney's fees and litigation costs, to the proportionate extent caused by each party's own negligence. If AVILES ENGINEERING is found to be prevalent in any third party lawsuits relating to this AGREEMENT, the CLIENT shall pay all AVILES ENGINEERING costs, including legal fees, that were incurred as a result thereof.

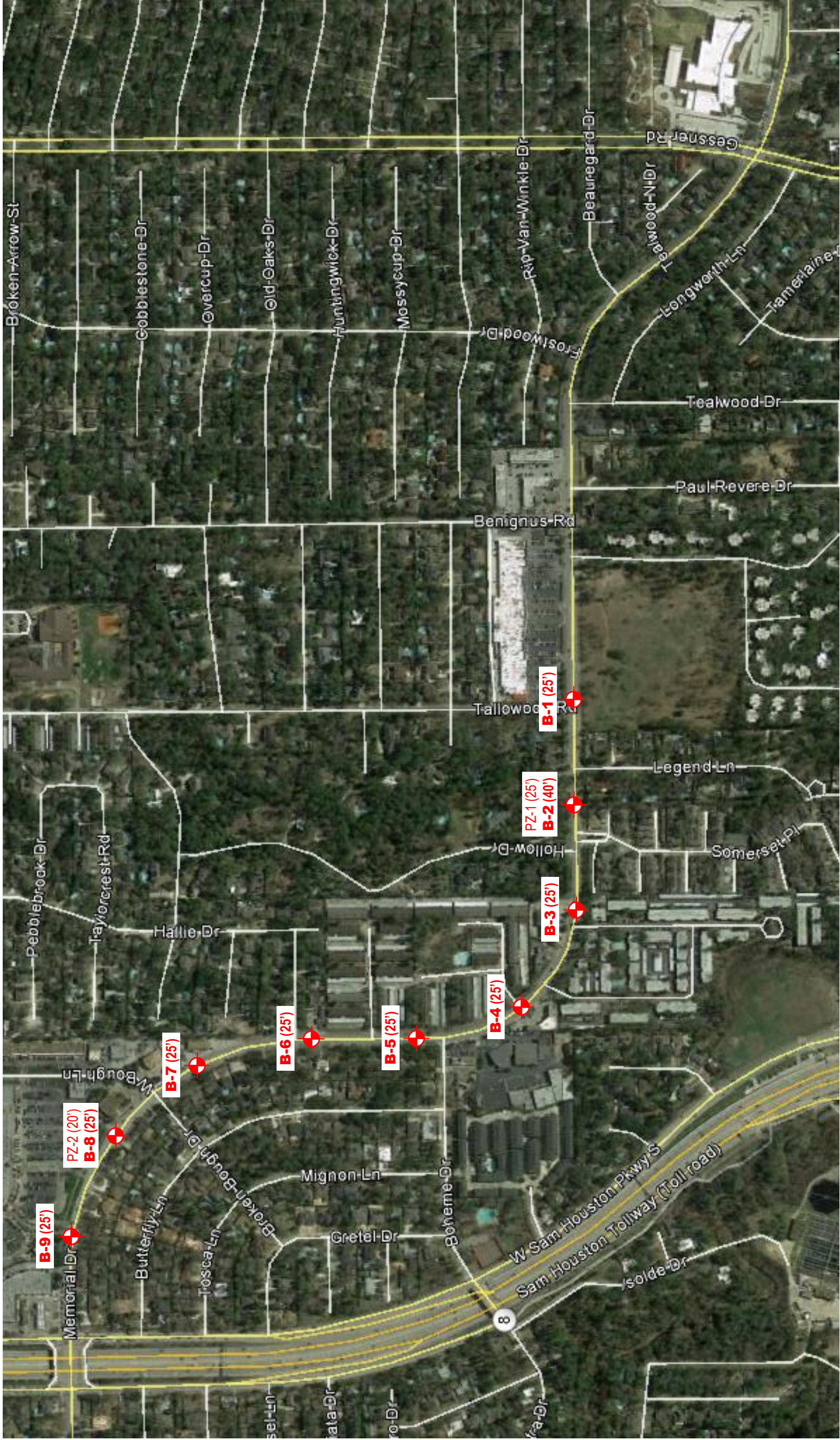
Geotechnical Investigation
TIRZ 17 Redevelopment Authority
Memorial Drive from Sam Houston Parkway to Tallowwood
Houston, Texas
AEC Proposal No. G2014-06-05R2
8/13/2014



ITEMIZED FEE ESTIMATE

9 Borings total: 8 @ 25', 1 @ 40'; 1 PZ @ 20', 1 PZ @ 25'

A. FIELD EXPLORATION	QTY	UNIT		RATE	AMOUNT
Truck Rig Mobilization/Demobilization	1	LS	@	\$350.00	\$350.00
Drill Crew Travel	3	hrs.	@	\$75.00	\$225.00
Field Coordination and Utility Checking (Staff Engineer)	8	hrs.	@	\$82.00	\$656.00
Lane Closure Permits (Staff Engineer)	6	hrs.	@	\$82.00	\$492.00
Boring Layout & Site Reconnaissance (Staff Engineer)	6	hrs.	@	\$82.00	\$492.00
Fault Evaluation (Senior Geologist)	6	hrs.	@	\$82.00	\$492.00
Asphalt Pavement Core (6" dia, 8" thick core, \$300 min.)	9	ea.	@	\$90.00	\$810.00
Field Supervision and Traffic Control Setup (Senior Technician)	24	hrs.	@	\$50.00	\$1,200.00
Soil Drilling and Continuous Sampling (0 to 20 ft)	180	ft.	@	\$18.00	\$3,240.00
Soil Drilling and Intermittent Sampling (20 to 40 ft)	60	ft.	@	\$16.00	\$960.00
Traffic Control (Police Officer)	24	hrs.	@	\$45.00	\$1,080.00
Grout Holes (Cement-Bentonite)	195	ft.	@	\$5.00	\$975.00
Site Cleanup	3	hrs.	@	\$185.00	\$555.00
Install Piezometers	45	ft.	@	\$14.00	\$630.00
Piezometer Caps	2	ea.	@	\$60.00	\$120.00
Piezometer Monitoring (Senior Technician, Two Trips)	8	hrs.	@	\$50.00	\$400.00
Plug and Abandon Piezometers	45	ft.	@	\$14.00	\$630.00
On-site Standby Time, if incurred (3-man Crew)	0	hrs.	@	\$185.00	\$0.00
Vehicle Charge	30	hrs.	@	\$7.50	\$225.00
	SUBTOTAL				\$13,532.00
B. GEOTECHNICAL LABORATORY TESTING					
Atterberg Limits (ASTM D-4318)	28	ea.	@	\$53.00	\$1,484.00
Passing No. 200 Sieve (ASTM D-1140)	28	ea.	@	\$41.00	\$1,148.00
Sieve Analysis w/o Hydrometer (ASTM D-422)	4	ea.	@	\$49.00	\$196.00
Particle Size Analysis w/ Hydrometer (ASTM D-422)	0	ea.	@	\$150.00	\$0.00
Moisture Content (ASTM D-2216)	102	ea.	@	\$8.00	\$816.00
Unconfined Compression (ASTM D-2166)	0	ea.	@	\$39.00	\$0.00
Unconsolidated-Undrained Test (ASTM D-2850)	28	ea.	@	\$54.00	\$1,512.00
	SUBTOTAL				\$5,156.00
C. ENGINEERING ANALYSES & REPORT					
Senior Engineer, P.E.	4	hrs.	@	\$123.00	\$492.00
Project Engineer, P.E.	20	hrs.	@	\$96.00	\$1,920.00
Staff Engineer, E.I.T.	16	hrs.	@	\$82.00	\$1,312.00
Draftsman	14	hrs.	@	\$50.00	\$700.00
Word Processor	3	hrs.	@	\$45.00	\$135.00
Reproduction (3 final copies included)	3	copies	@	\$30.00	\$90.00
	SUBTOTAL				\$4,649.00
ESTIMATED GEOTECHNICAL FEE					\$23,337.00



AVILES ENGINEERING CORPORATION	
PROPOSED BORING LOCATION PLAN	
TIRZ – MEMORIAL DRIVE FROM SAM HOUSTON PARKWAY TALLOWOOD ROAD HOUSTON, TEXAS	
AEC PROPOSAL NO: G2014-06-05R2	DATE: 08-13-2014
APPROX. SCALE: 1" = 500'	DRAFTED BY: WW
SOURCE DRAWING PROVIDED BY: GOOGLE EARTH PRO	
PLATE NO: PLATE 1	

August 12, 2014

Mr. Don Huml
Executive Director
Memorial City Redevelopment Authority / TIRZ 17
8955 Katy Freeway, Suite 215
Houston, Texas 77024

Re: Proposal for Phase 2 Detailed Design
For North Gessner Drainage and Mobility Improvements
North Gessner Road Reconstruction from IH-10 to north of Westview
TIRZ 17 CIP Nos. T-1732A
Klotz Associates Project No. 1111.004.000

Dear Mr. Huml:

In response your recent request, Klotz Associates has prepared this proposal for the engineering services to provide the Phase 2 Detailed Design for the North Gessner Drainage and Mobility Improvements Project. These services will include the preparation of the Phase 2 Detailed Design, Plans and Specifications for the proposed North Gessner Drainage and Mobility Improvements (TIRZ 17 CIP No. T-1732A), North Gessner Road Reconstruction from IH-10 to north of Westview Drive. The proposed project is identified in the current TIRZ 17 five-year Capital Improvement Plan as TIRZ 17 CIP No. T-1732A.

These engineering services are required for the preparation of and obtaining the required approvals for the construction plans and documents of the proposed improvements to N. Gessner Road based on the recommendations in the Preliminary Engineering Report (PER) (LAN August 2013, Preliminary Plans (LAN October 2012) and the updated TIRZ 17 Master Drainage Plan (ongoing) as well as coordination with the Conrad Sauer project. The construction cost for this project was estimated in the PER to be approximately \$15.1 million for projects T-1732A and T-1732B. Review submittals to TIRZ 17 and the City of Houston will be submitted at the 70%, 90% and final phase of detailed design work. The submittals will include the construction drawings as well as detailed construction cost estimates.

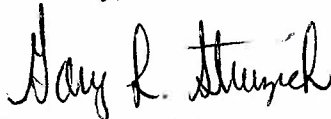
We propose to provide these Phase 2 Services as a Task Order under our Master Agreement for Professional Services. The requested Not-to-Exceed authorization of \$619,360.00 includes a Lump Sum of \$474,170.00 for Basic Services, a budget of \$20,000.00 for supplemental Subcontract Services and a Not-to-Exceed Fee of \$125,190.00 for Additional Services and Reimbursable Expenses. No subcontracted services are anticipated as these services were provided to LAN for the Preliminary Design Plans (October 2012). However, a budget of

Mr. Don Huml
August 12, 2014
Page 2 of 2

\$20,000.00 to be authorized by the Executive Director has been provided should updated survey or updated plans for Tree Protection, Street Lighting or Landscaping be required. Exhibit A provides detail for the proposed Scope of Work. Exhibit B provides the manhour estimate and fees requested for Basic and Additional Engineering Services. We anticipate completion of detailed design in approximately 180 days after Notice-to-Proceed and after receipt of any needed additional survey data, resolution of coordination issues with Conrad Sauer detention upgrades and Matthewson Drive extension, and resolution of issues related to the TIRZ 17 Regional Drainage Study, if any.

We appreciate the opportunity to continue to work with the Memorial City Redevelopment Authority (TIRZ 17) to provide Phase 2 Detailed Design Services for this project. Please call Ed Conger, P.E. or me if you have any questions or require any additional information.

Sincerely,



Gary L. Struzick, P.E., CFM
Vice President

GLS:azm

Enclosures

Accepted for
Memorial City Redevelopment Authority

Signature

Print

Date

Accepted for the City of Houston

Signature

Print

Date

Exhibit A
Scope of Services for Phase II Detailed Design for
North Gessner Road
Drainage and Mobility Improvements
From IH 10 (Katy Frwy.) Westbound Frontage Road north to Westview Drive
TIRZ 17 CIP No. T-1732A
August 12, 2014

This proposal is for the professional Engineering services for the drainage and mobility improvements and utility upgrades and relocations along Gessner Road from the Westbound (WB) Frontage Road of IH 10 (Katy Freeway) north to the north side of the Westview Drive intersection. The proposed project is identified in the TIRZ 17 five-year Capital Improvement Plan as TIRZ 17 CIP No. T-1732A. The construction plans and documents for the proposed improvements to Gessner Road will be based on the recommendations in the Preliminary Engineering Report (PER) (LAN - August 2013), the Preliminary Plans (LAN – October 2012), and the updated TIRZ 17 Regional Drainage Study (ongoing). The construction cost for the combined T-1732A and T-1732B projects was estimated in the PER to be approximately \$15.1 million.

The following scope details the procedures that will be followed to provide the civil engineering services to prepare bid-ready design plans for North Gessner Road. The existing Gessner Road pavement will be removed and replaced beginning at the north side of IH 10 WB Frontage Road and will continue north approximately 2700LF along Gessner Road to the north side of the Westview Drive intersection. The scope of work for the detailed design includes preparing the detailed design update of the N. Gessner Drainage and Mobility Improvements to incorporate the updated TIRZ 17 Regional Drainage Study and the new intersection at Matthewson Drive. Also included is an updated project Impact Analysis and Report for final approval by the City of Houston and TxDOT. The detailed construction documents will be prepared in accordance with City of Houston and TxDOT requirements.

I. Basic Engineering Services

A. Roadway, Drainage and Utility Improvements Construction Plan Production

1. General Sheets

The Title / Cover sheet will be prepared in accordance with City of Houston requirements. This sheet will include an area vicinity map to identify the project location. Other General Sheets include the Drawing Index, General Notes and Abbreviations, Survey Control Sheets and Sheet Layout Maps. The General Construction Notes will include standard City of Houston, Private Utility, TxDOT, as well as TIRZ 17 construction notes.

2. Existing and Proposed Typical Sections

Typical Sections will be prepared to show existing and proposed horizontal dimensions, typical location of existing and proposed drainage facilities and existing buried utilities, right-of-way and easements.

3. Demolition Plans

Demolition Plans will be prepared to show the location and extent of roadway, drainage and other facilities to be removed or replaced for this project.

4. Plan and Profile Sheets

Plan and Profile Sheets for the proposed drainage improvements along Gessner Road will be prepared in accordance with City of Houston requirements and will include existing topography and utilities as well as the alignment and extent of the proposed improvements in plan view. The profile will include the natural ground at the existing right-of-way and at the top of curb for the proposed roadway improvements. The size and location of existing public and private utilities will be shown based on available information. Plan and Profile Sheets along Cross Streets and at street crossings, prepared in accordance with City of Houston requirements, will also be provided.

5. Storm Sewer Lateral Sheets

Storm Sewer Lateral sheets will be prepared to show the profile and additional detail of the storm sewer elements that cannot be adequately shown on the Gessner Road Plan and Profile drawings.

6. HouStorm Inlet Analysis and Tables

Inlet analysis for all the inlets proposed along the reconstructed Gessner Road will be done using the City of Houston HouStorm to verify conformance with City requirements for allowable ponding during design storms. Output tables will be included in the plans as required by the City.

7. Storm Sewer Details

Special and non-standard details will be developed for construction of the drainage elements that are not shown in the standard details.

8. Standard Details

City of Houston and HCFC Standard Storm Sewer and Drainage Details will be included where applicable and edited as necessary for use on this project.

9. Structural Details

Structural Details will be prepared for the non-standard Junction Boxes required for this project.

10. Cross Sections

Cross Sections will be produced along the project baseline at 100-foot intervals showing the existing ground and proposed grading and existing and proposed drainage and utility elements within the right-of-way.

B. Water and Sanitary Sewer Design

1. Plan and Profile Drawings for Water and Sanitary Upgrades and Relocations

Plan and Profile Drawings, prepared in accordance with City of Houston requirements, will be prepared for water and sanitary sewer upgrades and relocations as recommended by the LAN PER.

2. Standard Details

City of Houston Standard Water and Sanitary Sewer Details will be included where applicable and edited as necessary for use on this project.

C. Drainage Design

1. Overall Drainage Area Map

An Overall Drainage Area Map will be prepared from the project drainage outfall at IH 10 north along Gessner Road to north of Westview Drive. Drainage boundaries will be developed based on the PER and best available information.

2. Existing Conditions Drainage Area Map

An Existing Conditions Drainage Area Map will be developed. The drainage areas developed for the PER will be updated and expanded to the inlet level within the project limits.

3. Proposed Conditions Drainage Area Map

A Proposed Conditions Drainage Area Map will be developed. The drainage areas developed for the PER will be updated and expanded to the inlet level within the project limits.

4. Proposed Storm System Design

The Proposed Storm Sewer Design will begin with validation of the recommended alternative previously from the PER. This will include translating the LAN INFOWORKS model of the initial PER trunkline into a SWMM model and incorporating changes in the TIRZ 17 Regional Drainage Study and utilization of the proposed upgrades to the Conrad Sauer Detention Pond in addition to developing the inlet detail required for detailed design. Detail Design for trunkline size, location, elevation and cover will be determined.

5. Proposed Storm Sewer 100-Year Analysis

The Proposed Storm Sewer 100-year Analysis will be provided that will include modifications required to comply with the 100-Year Extreme Event Requirements of the City of Houston.

6. Update Impact Analysis Report for Detailed Design

A Final Design Impact Analysis Report will be prepared for approval by the City and TxDOT. This will include determination of 2-Year and 100-Year impacts for Detailed Design, preparation of updated mitigation recommendations with estimated level-of service, and preparation of a Final Impact Analysis Report for the project.

D. Project Management, Coordination & Deliverables

1. Project Management / Project Controls

Project Management activities will be ongoing throughout the project. These activities include development of the project management plan, project documentation, reporting, correspondence, invoicing, project oversight, and project closeout. Also included are regular project meetings with the TIRZ and monthly reports to the TIRZ 17 Board.

2. Agency Coordination, Approvals and Signatures

Throughout the project, coordination meetings will be required to facilitate approvals and signatures from the City of Houston. TxDOT approvals will be required for work within TxDOT ROW. City and TxDOT approvals will be obtained for the Final Drainage Impact Analysis Report. Coordination for City of Houston and TxDOT review at 70%, 90%, Final will be provided as required to provide the necessary TxDOT and City of Houston signatures and approvals.

3. Private Utility Coordination

Private utility coordination will include obtaining the required utility signatures from AT&T and CenterPoint Gas and Electric and as required to avoid potential private utility conflicts.

4. Specifications

Specifications will be prepared in accordance with City of Houston requirements. Each Standard Specification will be reviewed and supplemented as required for this project. Additional non-standard specifications will be provided as required for the project construction. The Project Manual and front-end documents will be prepared as directed by the TIRZ and required for project bidding and construction.

5. Estimate of Construction Cost

Estimates of construction cost will be prepared for each review submittal during Detailed Design.

6. Assist with Coordination with Stakeholders

Klotz Associates will assist the TIRZ with coordination and meetings with project stakeholders as requested.

E. Project Quality Control

A project-specific Quality Assurance / Quality Control Plan will be prepared and implemented based on the Klotz Associates QA/QC Policy. A Senior Officer of the firm will be named as QA/QC Officer for the project. The Project QA / QC Officer is independent of the project Detail Design Team, provides periodic QA / QC audits and approves through 'Final Look' each Milestone Submittal. The QA / QC Plan provides for Constructability Reviews, Sustainability Review, and independent check for modeling, design calculations and quantity take-offs.

F. Bid Phase Services

1. Project Advertisement

Klotz Associates will prepare the legal notice advertising the project for bidding and have the notice placed in the Houston Business Journal. Bid Documents will be made available to Prospective Bidders and Plan Rooms through the internet on CIVCAST.

2. Conduct Pre-Bid Conference Meeting

Klotz Associates will schedule and conduct a Pre-Bid Conference meeting to provide Bidders with project information and answer questions.

3. Prepare Necessary Addenda

Klotz Associates will prepare addenda required to address issues, answer Bidder question, and provide clarifications as required during bidding.

4. Conduct Bid Opening

Klotz Associates will conduct the bid opening at the Klotz Associates Office and prepare a Bid Tabulation comparing all bids received.

5. Evaluate Bid Proposals

Klotz Associates will evaluate the bids received for accuracy and any bid irregularities. A Recommendation of Award will be prepared and submitted to TIRZ 17 based on the bid evaluation.

6. Contract Preparation Assistance

Klotz Associates will assist TIRZ 17 in final construction contract preparation as requested.

II. Additional Engineering Services

A. Special Design Services**1. Traffic Control Plans**

Traffic Control Plans, Specifications and Details will be prepared in accordance with the Texas Manual on Uniform Traffic Control Devices (TMUTCD), City of Houston, and TXDOT Requirements.

2. Traffic Signal Plans

Traffic signal modifications and temporary signals required during construction will be provided for the two existing traffic signals (Gessner at the WB IH 10 Frontage Road and Gessner at Westview). Design and construction plans will be prepared for new traffic signals to be constructed at these intersections.

3. Storm Water Pollution Prevention Plan (SW3P)

A Storm Water Pollution Prevention Plan will be prepared in accordance with TCEQ, City of Houston, and TxDOT requirements. SW3P Plans, Specifications, Details, and Report will be prepared for the project.

III. Subcontracted Services**A. Subcontracted Services**

Additional Subcontracted Services are not anticipated since Topographic Survey, Geotechnical Investigation, Landscape Plans, Street Lighting Plans and Tree Protection Plans previously provided for the LAN Preliminary Design Plans will be utilized to the fullest extent possible.

If additional subcontracted services such as supplemental Topographic Survey or updates to the Tree Protection, Street Lighting, or Landscape Plans are identified as needed for completion of the project, a budget of \$20,000.00 has been set for use upon authorization by the Executive Director.

IV. Services Not Included in Scope of Work

- A.** ROW / Easement Acquisition and Survey Services
- B.** Landscape Architecture Services
- C.** Phase II ESA
- D.** Urban Forestry Services
- E.** Subsurface Utility Excavation
- F.** Construction Phase Services
- G.** Construction Management Services
- H.** Preparation of a LOMR or any submittal to HCFCD or FEMA

V. Assumptions

- A.** No coordination with HCFCD will be required.
- B.** The Tree Protection Plan, Street Lighting Plan and Landscaping Plan previously prepared for LAN will be utilized.
- C.** Traffic Signal Plans if required for the new Mattewson Drive intersection will be provided by the Conrad Sauer project.
- D.** No additional design will be required for connection of the proposed Briar Branch Trail to the new Mattewson Drive intersection.

Exhibit B

Fee Estimate for Phase II Services
N. Gessner Drainage and Mobility Improvements
(T-1732A)
from IH 10 (Katy Frwy) to Westview
for TIRZ 17
August 12, 2014

PHASE II SERVICES 1.00	Dept. Manager \$ 225.00	Sr.Project Manager \$ 210.00	Project Engineer \$ 135.00	Assoc. Engineer \$ 120.00	Senior Designer \$ 120.00	Clerical / Admin \$ 80.00	Total Labor Hours	Total Labor Cost
BASIC ENGINEERING SERVICES								
I. Basic Engineering Services (2 Bid Packages) Package A								
A. Roadway & Drainage Improvements Plan Production (Bid Package A)								
1. General Sheets								
a. Title Sheet		2	4		4		10	\$ 1,440.00
b. Drawing Index		2	4		4		10	\$ 1,440.00
c. General Notes and Abbreviations		2	4	8	4		18	\$ 2,400.00
d. Survey Control Sheets (4)		1	9		12		22	\$ 2,865.00
e. Sheet Layout Maps (2)		1	6		28		35	\$ 4,380.00
2. Existing and Proposed Typical Sections (10)		8	16	24	48		96	\$ 12,480.00
3. Demolition Plans (4 shts)		12	22	32	80		146	\$ 18,930.00
4. Plan and Profile Sheets								
a. Plan-Profile Sheets (Gessner = 12 shts)	4	36	66	80	264		450	\$ 58,650.00
b. Plan-Profile Sheets (@Cross Streets = 12 shts)		18	34	46	120		218	\$ 28,290.00
5. Storm Sewer Lateral Sheets (5 shts)	3	12	28	36	110		189	\$ 24,495.00
6. HouStorm Inlet Analysis & Tables (2 shts)	1	8	24	40	40		113	\$ 14,745.00
7. Storm Sewer Details		8	24	32	48		112	\$ 14,520.00
8. Standard Details		6	12	18	24		60	\$ 7,920.00
9. Structural Details								
a. Junction Box Details		4	20	32	40		96	\$ 12,180.00
10. Cross Sections (4 shts)		4	12	20	40		76	\$ 9,660.00
B. Water and Sanitary Sewer Design								
1. Plan-Profile Sheets (12 shts)		18	32	40	132		222	\$ 28,740.00
2. Standard Details		4	8		18		30	\$ 4,080.00
C. Drainage Design								
1. Overall Drainage Area Map		1	4	12	18		35	\$ 4,350.00
2. Existing Conditions Drainage Area Map		1	4	12	18		35	\$ 4,350.00
3. Proposed Conditions Drainage Area Map		1	6	12	12		31	\$ 3,900.00
4. Proposed Storm System Design		4	6	12	12		34	\$ 4,530.00
a. Validation of PER Recommended Alternative							0	\$ -

Exhibit B

**Fee Estimate for Phase II Services
N. Gessner Drainage and Mobility Improvements
(T-1732A)**

from IH 10 (Katy Frwy) to Westview
for TIRZ 17

August 12, 2014

PHASE II SERVICES 1.00	Dept. Manager \$ 225.00	Sr.Project Manager \$ 210.00	Project Engineer \$ 135.00	Assoc. Engineer \$ 120.00	Senior Designer \$ 120.00	Clerical/ Admin \$ 80.00	Total Labor Hours	Total Labor Cost
BASIC ENGINEERING SERVICES								
1.) Translate LAN INFOWORKS Existing Conditions to SWMM Model & update Current Conditions	2	4	8	8			22 \$	3,330.00
2.) Refine Boundary Conditions		1	4	20	9		34 \$	4,230.00
b. Translate LAN INFOWORKS Proposed Conditions to SWMM Model for PER Rec. Alt.							0 \$	-
1.) Adjust Preliminary Model to Develop System Detail	1		5	28			34 \$	4,260.00
2.) Update & Develop Inlet Nodes	1	2	8	40	8		59 \$	7,485.00
3.) Confirm & Modify Storm System	1	8	9	21			39 \$	5,640.00
4.) Update Model Pipe Els from Topo Survey	1	1	2	36	6		46 \$	5,745.00
c. Execute SWMM Model for Detailed Design							0 \$	-
1.) Refine Design & Model	1	6	24	36			67 \$	9,045.00
2.) Proposed Storm Sewer Design Model Tables		4	6	12	8		30 \$	4,050.00
5. Proposed Storm Sewer 100-Year Analysis		4	6	12	12		34 \$	4,530.00
a. Modify for 100yr Extreme Event Requirements	1	6	9	16			32 \$	4,620.00
b. Proposed Storm Sewer 100-Year Analysis Model Tables		4	6	12	12		34 \$	4,530.00
6. Updated Impact Analysis Final Report							0 \$	-
a. Determine Impacts for 2yr & 100yr for Final Design	1	3	6	14			24 \$	3,345.00
b. Prepare Updated Mitigation Recommendation w/ LOS	1	4	9	34			48 \$	6,360.00
c. Prepare Updated Impact Analysis Final Report	2	16	24	16	12		74 \$	10,730.00
D. Project Management, Coordination & Deliverables								
1. Project Management							0 \$	-
a. Project Management & Project Controls	8	12	16				32	9,040.00
b. Project Progress Meetings w/ TIRZ	12	40	40				92 \$	16,500.00
2. Agency Coordination, Approvals & Signatures								
a. TxDOT Coordination, Review and Approval of Construction Plans (90 & Final)	8	18	24				50 \$	8,820.00

Exhibit B
Fee Estimate for Phase II Services
N. Gessner Drainage and Mobility Improvements
(T-1732A)
from IH 10 (Katy Frwy) to Westview
for TIRZ 17
August 12, 2014

PHASE II SERVICES 1.00	Dept. Manager \$ 225.00	Sr.Project Manager \$ 210.00	Project Engineer \$ 135.00	Assoc. Engineer \$ 120.00	Senior Designer \$ 120.00	Clerical / Admin \$ 80.00	Total Labor Hours	Total Labor Cost
BASIC ENGINEERING SERVICES								
b. City of Houston Coordination, Review and Approval of Construction Plans (90 & Final)	12	24	32				68 \$	12,060.00
3. Private Utility Coordination								
a. Utility Signatures (AT&T, CenterPoint Gas & Elec.)		2	8	16			26 \$	3,420.00
b. Utility Conflict Resolution		6	12	32			50 \$	6,720.00
4. Specifications & Project Manual							0 \$	-
a. Specifications		8	24	32			68 \$	9,080.00
b. Project Manual & Front-End Documents		8	20	32			64 \$	8,540.00
5. Construction Cost Estimate	2	8	20	32	36		98 \$	12,990.00
6. Coordination with Stakeholders	1	18	24	40			87 \$	12,365.00
E. Project Quality Control (QA/QC)	18	48	54				120 \$	21,420.00
F. Bid Phase Services								
1. Project Advertisement		1	2	2			7 \$	880.00
2. Prebid Conference Meeting		2	1	3			7 \$	995.00
3. Prepare Addenda & Clarifications		2	12	16	2		33 \$	4,280.00
4. Conduct Bid Opening & Bid Tabulation		2	6	8			16 \$	2,190.00
5. Bid Evaluation & Recommendation for Award	1	2	4	2			10 \$	1,505.00
5. Contract Preparation Assistance		2	4				8 \$	1,120.00
TOTAL PH 2 BASIC ENGINEERING SERVICES - Pkg A	82	419	774	976	1181	55	3487 \$	474,170.00
TOTAL PHASE 2 ADDITIONAL ENGINEERING SERVICES								
SUBCONTRACTED ENGINEERING SERVICES (to be authorized by Executive Director if required)								
REIMBURSIBLE EXPENSES								
TOTAL FOR PHASE 2 - Pkg A								
							\$	619,360.00

**Fee Estimate for Phase II Services
Mobility Improvements
(T-1732A)
from IH 10 (Katy Frwy) to Westview
for TIRZ 17
August 12, 2014**

Exhibit B

PHASE II SERVICES 1.00	Dept. Manager \$ 225.00	Sr.Project Manager \$ 210.00	Project Engineer \$ 135.00	Assoc. Engineer \$ 120.00	Senior Designer \$ 120.00	Clerical / Admin \$ 80.00	Total Labor Hours	Total Labor Cost
ADDITIONAL ENGINEERING SERVICES								
II. Additional Engineering Services								
A. Traffic Control Plans								
1. TCP General Notes		1	4	8	4		17	\$ 2,190.00
2. TCP Overall Layout Sheets (2)		1	6	12	24		43	\$ 5,340.00
3. TCP Construction Sequencing and Phasing		2	6	12	28		48	\$ 6,030.00
4. TCP Typical Cross Sections		1	4	8	4		17	\$ 2,190.00
4. TCP Phasing Plans (6)		1	6	12	24		43	\$ 5,340.00
6. TCP Details		1	4	8	4		17	\$ 2,190.00
B. Traffic Signals								
1. Traffic Signals - Gessner @ IH 10 WB Frontage Road								
a. Temp. Signal Modifications During Construction		6	12	24	36		78	\$ 10,080.00
b. New Traffic Signal Design		20	42	56	78		196	\$ 25,950.00
2. Traffic Signals - Gessner @ Westview								
a. Temp. Signal Modifications During Construction		3	8	20	32		63	\$ 7,950.00
b. New Traffic Signal Design		18	38	54	72		182	\$ 24,030.00
C. Stormwater Pollution Prevention Plan (SW3P)								
1. SW3P Plans (6 shts)		2	8	18	26		54	\$ 6,780.00
2. SW3P Details		1	2	8	4		15	\$ 1,920.00
3. SW3P Report		1	2	12	4		19	\$ 2,400.00
TOTAL ADDITIONAL SERVICES	0	58	142	252	340	0	792	\$ 102,390.00
TOTAL FOR PHASE 2 ADDITIONAL SERVICES								
								\$ 102,390.00

Fee Estimate for Phase II Services
 Mobility Improvements
 (T-1732A)
 from IH 10 (Katy Frwy) to Westview
 for TIRZ 17
 August 12, 2014

PHASE II SERVICES			
SUBCONTRACTED ENGINEERING SERVICES			
Task	Cost	Quantity	Total
To be Authorized by Executive Director	\$ 20,000.00		(w/ 8% markup for subs) \$ 20,000.00
	\$ -		\$ -
	\$ -		\$ -
Total	\$ 20,000.00		\$ 20,000.00
REIMBURSIBLE EXPENSES			
Item	Quantity	Unit Cost	Total
1. Printing & Reproduction (LS)	1.00	\$7,500.00	\$7,500.00
2. City of Houston Review Fee (\$107.05 Admin+160 Shts @ \$77.07/sht)	1.00	\$12,438.25	\$12,438.25
3. Houston Business Journal Bid Advertisement (2 wks)	1.00	\$2,000.00	\$2,000.00
4. CIVCAST Bid Advertisement	1.00	\$100.00	\$100.00
5. Postage, Deliveries & Misc.		\$321.75	\$321.75
6. Mileage (@0.55/mi)	800	\$440.00	\$440.00
Total			\$ 22,800.00



August 14, 2014

Ann Givens, Chair of the Board
Memorial City Redevelopment Authority / TIRZ 17
8955 Katy Freeway, Suite 215
Houston, Texas 77024

Attention: Mrs. Ann Givens

**Re: Lumpkin Roadway Improvements from IH-10 Frontage Road to Westview Drive
TIRZ CIP No. T-1709– Supplemental Engineering Services to Phase II Detailed Design**

Dear Mrs. Givens,

As requested, Lockwood, Andrews and Newnam, Inc. (LAN) is submitting this supplemental engineering services proposal to amend the Lumpkin Roadway Improvements plans to remove the northern portion from Westview Drive to Northbrook Drive. The northern portion will be bid as a separate package at a later date. The engineering services will consist of revising and finalizing relevant detailed design plans for roadway, drainage, pedestrian, public utilities & traffic improvements.

LAN proposes to perform supplemental engineering services for a lump sum amount of \$37,500. Exhibit "A" provides a detailed breakdown estimate of the fees for engineering services. We are prepared to begin this work immediately.

Please feel free to contact me at (713)266-6900 if you have any questions or need additional information.

Sincerely,



Muhammad Ali, P.E.
Project Manager

MA:RO:JU 

Accepted For
Memorial City Redevelopment Authority

Signature Date

Print
Accepted for City of Houston

Signature Date

Print

Attachments: Exhibit A – Level of Effort

Exhibit A

**Lumpkin Roadway Improvements from IH-10 Frontage Road to Westview Drive
LEVEL OF EFFORT**

PHASE II - SUPPLEMENTAL ENGINEERING SERVICES - DETAILED DESIGN

I. BASIC ENGINEERING SERVICES

DESCRIPTION OF WORK TASKS	Sr. PROJ MGR	PROJ MGR	PROJECT ENGINEER	GRAD ENGINEER	CADD TECH	ADMIN ASSNT	TOTAL HOURS	LABOR COSTS
A. Roadway Design Tasks								
1 Update General Sheets/Plan Set		1	2	8	12	0	23	\$ 2,515.00
2 Update Existing and Proposed Typical Sections			1	2	4	0	7	\$ 750.00
3 Update Relevant Plan and Profile Sheets		2	4	8	14	0	28	\$ 3,170.00
4 Update Cross Sections			1	2	8	0	11	\$ 1,110.00
5 Update Signing and Pavement Marking Sheets			1	2	8	0	11	\$ 1,110.00
Total	0	3	9	22	46	0	80	\$ 8,655.00
B. Water & Sanitary Sewer Design Tasks								
1 Update Relevant Plan and Profile Sheets		2	4	8	12	0	26	\$ 2,990.00
2 Update Water & Sanitary Sewer Crossings		1	2	2	4	0	9	\$ 1,075.00
Total	0	3	6	10	16	0	35	\$ 4,065.00
C. Drainage Design Tasks								
1 Update Existing & Proposed Conditions Detailed Drainage Area Map			1	2	6	0	9	\$ 930.00
2 Update Relevant Plan and Profile Sheets		2	4	8	12	0	26	\$ 2,990.00
3 Update Storm Sewer Lateral Sheets			2	2	2	0	6	\$ 720.00
Total	0	2	7	12	20	0	41	\$ 4,640.00
D. Project Management, Coordination and Deliverables								
1 Project Management / Project Controls	2	2	6				10	\$ 1,700.00
2 City Coordination, Approvals & Signatures	2	2	6			2	12	\$ 1,870.00
3 Update Project Manual/Specifications		4	12	18		2	36	\$ 4,830.00
4 Estimate of Construction Cost		2	4	6			12	\$ 1,670.00
Total	4	10	28	24	0	4	70	\$ 10,070.00
E. Project Quality Control								
1 Quality Assurance / Quality Control	2	6	8	0	0	0	16	\$ 2,700.00
Total	2	6	8	0	0	0	16	\$ 2,700.00
TOTAL HOURS	6	24	58	68	82	4	242	
Contract Labor Rate	\$225.00	\$175.00	\$150.00	\$120.00	\$90.00	\$85.00		
TOTAL LABOR COSTS BASIC ENGINEERING SERVICES	\$1,350.00	\$4,200.00	\$8,700.00	\$8,160.00	\$7,380.00	\$340.00		\$ 30,130.00

II. ADDITIONAL ENGINEERING SERVICES

DESCRIPTION OF WORK TASKS	Sr. PROJ MGR	PROJ MGR	PROJECT ENGINEER	GRAD ENGINEER	CADD TECH	ADMIN ASSNT	TOTAL HOURS	LABOR COSTS
A. Special Designs								
1 Update Traffic Control Plans		1	2	8	12		23	\$ 2,515.00
2 Update Storm Water Pollution Prevention Plans			1	1	2		4	\$ 450.00
3 Update Lighting Plans			1	1	2		4	\$ 450.00
Total	0	1	4	10	16	0	31	\$ 3,415.00

III. REIMBURSABLES

REIMBURSABLE EXPENSES	TOTAL
1 Printing and Reproduction	\$ 1,500.00
2 City of Houston Review Fee (approximately 30 additional sheets)	\$ 2,500.00
TOTAL REIMBURSABLE EXPENSES	\$ 4,000.00

PHASE II Detailed Design	
Basic Engineering Services	\$ 30,130.00
Add. Eng. Services/Subs/Expenses	\$ 7,415.00
GRAND TOTAL	\$ 37,545.00

TIRZ 17 Redevelopment Authority (aka the Memorial City Redevelopment Authority)
Request for Qualifications for Land Search Consultant Services
RFQ No. 2014-01

AMENDMENT 01

Clarifications: 1) Provide more detail regarding your access to the tax collector/assessor databases and explain how you will identify property that is delinquent/or accounts that have tax liens filed against it. 2) Describe your process how distressed properties, environmental concerns, tax liens, foreclosure, and other encumbrances will be discovered and identified. 3) Describe your strategy step by step for identifying and evaluating multiple sites base on the search criteria outlined in RFQ 2014-01. 4) Please provide examples of a prior track record finding distressed property and include maps and exhibits that illustrate and demonstrate your distressed property search experience and abilities.

Submittal Requirements: If your firm is interested in submitting SOQ clarifications, please submit Seven (7) copies and a disk with a pdf of the submittal to Mr. Don Huml, Executive Director at 8955 Katy Freeway, Suite 215, Houston, TX 77024 no later than 3:00 PM on Friday August 8th, 2014. Late submittals will not be accepted. Each firm is responsible for delivery of their submittal by the due date and time to the appropriate location. By submitting your response, it is understood and acknowledged that you have read and understood this RFQ and Amendment and all of its requirements. Please direct your questions to Mr. Don Huml at cell phone: 713-829-5720 or email: donhuml@houstontirz17.org.

Submittal Instructions: Please limit responses to fifteen (15) pages including maps and exhibits. Responses shall be sealed in an envelope clearly marked with the RFQ information. All responses submitted shall become the property of Memorial City Redevelopment Authority.

Selection Criteria: The thoroughness, relevance, and level of detail of your response to Amendment 01 may count up to 25 extra points towards your total score.

Award of Contract: The Memorial City Redevelopment Authority reserves the right to choose the consultant whose submittal of qualifications to this solicitation will be most advantageous to its goals. The Authority reserves the right to reject any or all submittals or qualifications and to waive informalities and minor irregularities in submittals received. Firms not selected may request a debriefing after the TIRZ 17 Board of Directors has approved the selection of successful consultant.

TIRZ 17 Redevelopment Authority (aka the Memorial City Redevelopment Authority)
Request for Qualifications for Land Search Consultant Services
RFQ No. 2014-01

Background: Tax Increment Reinvestment Zone No. 17 (TIRZ 17) was created to act on behalf of the City of Houston (City) to assist in the performance of specific functions within the TIRZ 17 boundary such as the construction and installation of drainage and roadway infrastructure as well as street lighting, parks facilities, green spaces, and water and sewer utilities. TIRZ 17 contains approximately 1,000 acres of primarily commercial real estate on the north and south sides of IH 10 from Beltway 8 to Bunker Hill Road. TIRZ 17 is governed by a seven member board of directors appointed by the City of Houston.

Potential Scope of Work: TIRZ 17 Redevelopment Authority requests submission of qualifications by professional management and geographical information systems (GIS) consulting firms for an assessment of properties within the Zone or a predetermined area in the Buffalo Bayou watershed that may be suited for storm water detention to support the TIRZ long range requirement for additional drainage and detention infrastructure. Candidate properties should be capable of meeting a minimum land area of five (5) acres.

The Authority will engage a firm to perform Land Search Consultant Services to identify and evaluate multiple sites based on a variety of factors including but not limited to the following: distressed properties, environmental concerns, tax liens, foreclosure, and other encumbrances. The Land Search Consultant will have the ability to provide comprehensive land search services including: the procurement of all data bases, mapping, data base creation and management, land-use analysis, regulatory platting requirements, public presentation materials. The Land Search Consultant will attend meetings as required and interact with the Authority's engineers and other professional consultants as necessary.

Deliverables to be supplied are as follows:

1. Overview map (minimum size 11" x 17") showing the boundaries of all suitable properties with the physical address or an identification number keyed to a spreadsheet that provides details pertaining to each property. The map should show:
 - Surrounding area road network
 - Nearby waterways
 - Municipal names and boundaries
 - Current boundaries of TIRZ 17

2. Spreadsheet listing the address or location of each candidate site keyed to the overview map with the following information:
 - Current ownership and contact information
 - Key map sector and subsector
 - Taxing entities and ad valorem rates
 - Legal description
 - Property classification (land use)
 - Potential alternative land uses, if any
 - Size in acres and square feet
 - Square footage of improvements, if any
 - Most recent HCAD market and appraisal values for land, improvements and total

2. Cont'd – Spreadsheet listing the address or location each candidate site keyed to the overview map with the following information:
 - If all or part for sale, listing broker name, firm and contact information
 - Distances to, and directions of, closest waterways
 - Environmental concerns
 - Encumbrances, if any
3. One or more recent (2012 or later) aerial imagery map(s) showing the outlined candidate detention properties, the features and boundaries mentioned under deliverable number 1 above, as well as nearby land use and vegetation.
4. Individual site maps for each candidate site.
5. A separate report on any recent (2012 – 2014) transactions involving nearby properties listing property address, square footage of land, square footage of improvements, most recent tax appraised values for land and improvements, selling price and price per square foot of land (as available), grantor, grantee and date of sale for each.

Submittal Requirements: If your firm is interested in submitting qualifications, please submit Seven (7) copies and a disk with a pdf of the submittal to Mr. Don Huml, Executive Director at 8955 Katy Freeway, Suite 215, Houston, TX 77024 no later than 3:00 PM on Friday July 18, 2014. Late submittals will not be accepted. Each firm is responsible for delivery of their submittal by the due date and time to the appropriate location. By submitting your response, it is understood and acknowledged that you have read and understood this RFQ and all of its requirements. Please direct your questions to Mr. Don Huml at cell phone: 713-829-5720 or email: donhuml@houstontirz17.org.

Submittal Instructions: Responses should adhere to the following format: Prepare a statement of qualifications with a cover letter that clearly demonstrates your land search experience and capabilities. Include at least five (5) references from Public Agencies. Please limit responses to ten (10) pages. Detailed resumes of not more than two (2) pages per person may be included as an appendix. Responses shall be sealed in an envelope clearly marked with the RFQ information. All responses submitted shall become the property of Memorial City Redevelopment Authority.

Selection Criteria: Firms submitting qualifications will be rated based on the following:

- 30% Past experience with Public Agencies and Tax Increment Reinvestment Zones.
- 25% Firm's reputation and past experience in Land Search Consultant Services.
- 20% Qualifications and experience of the Proposed Project Manager and team.
- 15% Firm's local resources and location of local office.
- 10% Firm reflects the multi-cultural diversity of the Houston Community.

Award of Contract: The Memorial City Redevelopment Authority reserves the right to choose the consultant whose submittal of qualifications to this solicitation will be most advantageous to its goals. The Authority reserves the right to reject any or all submittals or qualifications and to waive informalities and minor irregularities in submittals received. Firms not selected may request a debriefing after the TIRZ 17 Board of Directors has approved the selection of successful consultant.

MEMORIAL CITY REDEVELOPMENT AUTHORITY
 STATEMENT OF QUALIFICATIONS SCORING SHEET - LAND SEARCH CONSULTANT
 FISCAL YEAR 2015

	Maximum Score	Contract Land Staff	Hawes Hill Calderon	Marsh Darcy Partners*	PAS
Experience w/ Public Agencies & TIRZ	30	20	30	30	25
Reputation & Experience as Land Search Firm	25	25	23	23	24
Project Team	20	16	20	20	18
Local Resources	15	13	13	12	13
Diversity	10	5	5	6	5
Alternate 01	25	19	24	22	25
Total Maximum Points	125	98	115	113	110

ATTEST: Don Humi
 Don Humi: Executive Director

DATE: 08/14/2014

*Full Disclosure: Memorial City RDA subleases office space from Marsh Darcy Partners at 8955 Katy Freeway, Suite 215, Houston, TX 77024.



END OF REPORT